January 1961

# SCHOOL MANAGEMENT

Education Library

PRACTICAL SOLUTIONS TO SCHOOL MANAGEMENT PROBLEMS

## Cost of Education Index

IN THIS REPORT:

How to explain to your public the rising cost of education

How to use the Cost of Education Index

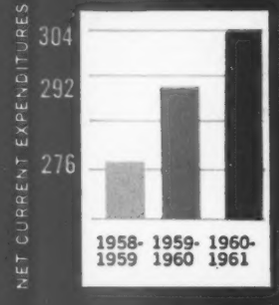
The National Index for 1960-61

How to evaluate your district's financial effort

How much should you spend on
- Administration and teaching
- Debt service and capital outlay
- Maintenance and operations
- Auxiliary services

An analysis of the top 25% of U. S. districts

How to compare your district with your neighbors

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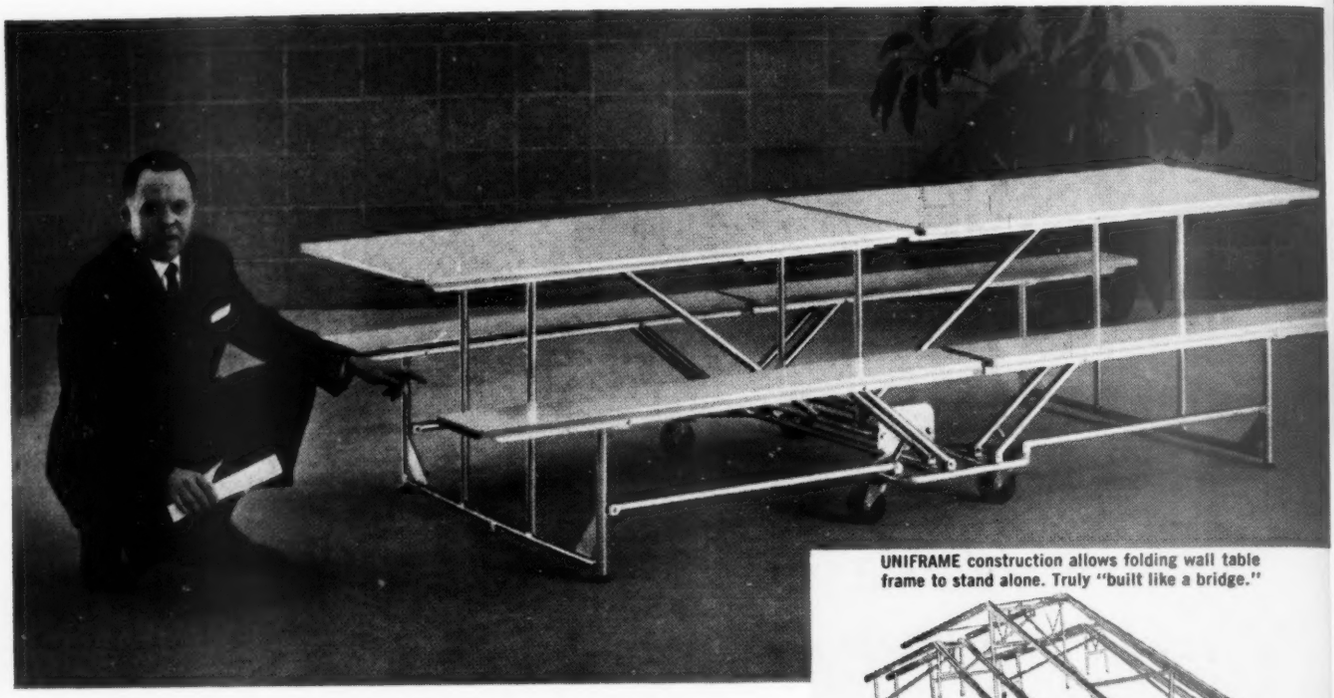
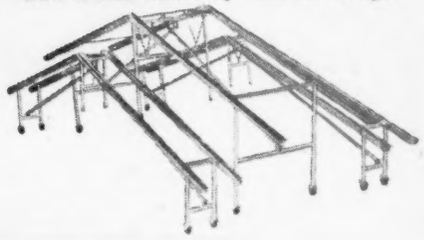


UNIFRAME construction allows folding wall table frame to stand alone. Truly "built like a bridge."

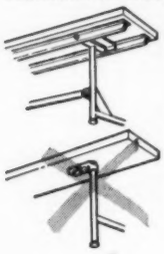


# AN OPEN LETTER TO SCHOOL MANAGERS ON IMPROVED MULTI-USE ROOM EQUIPMENT

## UNIFRAME® design makes Roll-away equipment efficient

**Gentlemen:**

During my years of association with the development and sale of multi-use room equipment it became increasingly apparent that the basic structure of such equipment should be improved. This was our foremost thought in the development and manufacture of Uniframe products at Smith System Manufacturing Company. Now I am pleased to announce that with development of Uniframe construction this important advance has been achieved. Uniframe construction is different from the conventional. Its advantages are so apparent you can expect to see it adopted under various names by other manufacturers in the future. That is because Uniframe means unit-frame construction – so widely used today in aircraft and automobile manufacture. With uniframe construction, working surfaces of tables, benches, choral risers, etc., are *not used for structural support.* The welded steel skeletons of Uniframe units will stand by themselves!



Ordinary construction methods use tops and benches as structural members, fastening them to hinges, legs, etc. This method imposes undue strain and stress on all points of attachment. The result is unstable, short-lived roll-away equipment.

Inherent strength and stability are only part of the benefits resulting from Uniframe construction.

Smith System Uniframe products are safer to operate. Self-powered, they quickly set up or put away . . . even by students. And their unique construction means significantly longer useful life.

With all these advantages, you might think that Uniframe construction costs more. Such is not the case. Modern manufacturing methods and an effective distribution system allow us to market Uniframe products at *prices competitive with ordinary equipment.*

Let us give you all the details about Uniframe and other fine Smith System products for your school. Just a note from you will bring literature, or one of our representatives will call, if you prefer.

Sincerely,
NEWELL V. RISDALL, *Sales Manager*
Smith System Manufacturing Co.
Minneapolis 14, Minnesota

**See Uniframe Products at AASA exhibits – Philadelphia Booth No. L-44, 46**
**San Francisco Booth No. B-16, 18 St. Louis Booth No. EE-9**

Smith System

**MANUFACTURING COMPANY**

**Tubular Products Division**
**212 Ontario Street S.E.**
**Minneapolis 14, Minnesota**

(Circle number 774 for more information)

# HOW HOOVER CAN HELP YOU SAVE MONEY IN YOUR HOME ECONOMICS DEPARTMENT

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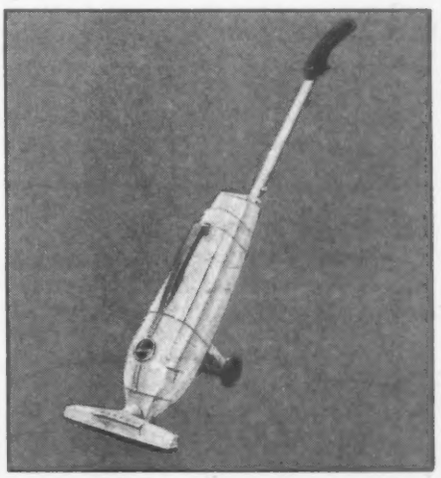
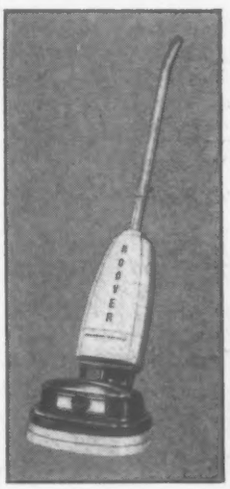
To provide your teachers and students with fine, up-to-date appliances, fill in the coupon below. We'll send you prices and other details. The Hoover Company, North Canton, Ohio.

New Hoover Convertible, famous for rug-cleaning efficiency for over 50 years.

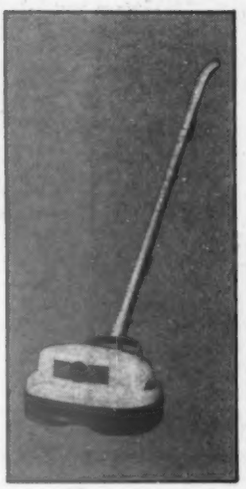
New Hoover Constellation, built to stand long, hard use.



New Hoover Electric Floor Washer washes and drys hard-surface flooring.



New Hoover Shampoo-Polisher. Multi-purpose appliance. Shampoos rugs, waxes and polishes floors.



Hoover floor polisher.

**HOOVER®**

FINE APPLIANCES

*. . . around the house, around the world ®*

**Hoover Home Institute**
**The Hoover Company,**
**North Canton, Ohio**

Please send me information on the Educational Purchase Plan for home economics departments.

NAME_____

TITLE_____

SCHOOL_____

STREET_____

CITY_____ ZONE_____

STATE_____

(Circle number 755 for more information)



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# SCHOOL MANAGEMENT

January 1961 VOL. 5 NO. 1


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**Advertising Offices**

**New York:** 141 E. 44th St., MU 7-0583
**Chicago:** 612 N. Michigan Ave., Del 7-0112
**Cleveland:** 55 Public Square, CH 1-2612
**Los Angeles:** The Robert W. Walker Co., 730 South Western Ave., Dunkirk 7-4388
**San Francisco:** The Robert W. Walker Co., 57 Post St., Sutter 1-5568

EDUCATIONAL PRESS ASSOCIATION OF AMERICA

Member of Business Publications Audit

BPA

Copyright 1961 by School Management Magazines, Inc. Published monthly by School Management Magazines, Inc., 22 West Putnam Ave., Greenwich, Conn.



*A publication of* **The Management Publishing Group**
**Editorial and Administrative Offices:** 22 West Putnam Avenue, Greenwich, Conn.
*William S. Kline,* **President;** *Jerome W. Harris,* **Editor-in-Chief;** *Edwin D. Kline,* **Business Manager**

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**How to compare your district with your neighbors** **160**
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**Permanent color for concrete with KWIK-COLOR**

Here's an easy way to give permanent, non-fading color to your concrete floors . . . and eliminate concrete "dusting" forever!

*Kwik-Color* Concrete Seal is a superior concrete beautifier and preserver made from an emulsified plastic resin.

It is practically odorless, non-inflammable, water-resistant, and easy to apply on either new or old concrete. One gallon covers approximately 800 square feet of concrete.

**Dries In Minutes.** *Kwik-Color* dries in 20 or 30 minutes. This means that busy floors are back in service within 2 hours after etching, sealing, and waxing!

*Kwik-Color* is available in *permanent*, non-fading Tile Red, Light Gray and Light Green colors.

The complete, scientific MULTI-CLEAN METHOD for initial treatment of new or old concrete, low-cost maintenance, and restoration of old floors that have previously been painted or sealed is described, step-by-step, in bulletin, "*Multi-Clean Method for Maintaining Your Concrete Floors*".

ANOTHER PRODUCT OF MULTI-CLEAN RESEARCH

For your free copy . . . or for more information on *Kwik-Color*, call your local MULTI-CLEAN Distributor or mail coupon *today*.

**MAIL COUPON TODAY!**

**MULTI-CLEAN PRODUCTS, INC.**
**Dept. ST-80-11, St. Paul 16, Minnesota**

☐ I'd like more information on KWIK-COLOR; also send information on Scientific MULTI-CLEAN METHOD for maintaining: ☐ Asphalt Tile; ☐ Gym Floors; ☐ Terrazzo, Oxychloride; ☐ Concrete; ☐ Rubber Tile; ☐ Vinyl Tile; ☐ Other (specify)_____

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# a new concept in
# SPEECH TRAINING

# AND CORRECTION

## *Assisting Clinician and Patient*

Electronic Teaching Laboratories has developed a new aid to speech training and correction. The MONITOR E-5 dual channel tape recording system has been pedagogically designed to supplement the activities of the clinician. Practical applications of the MONITOR system have been developed over a wide range of teaching situations in school and clinic research projects.

The MONITOR enables a patient to hear a prerecorded tutorial voice, and then to record his own responses for correction and improvement. Unlimited practice recordings may be made, but the stimulus material is nonerasable. The patient may work at his own pace—privately and without distraction—whether by himself or in a group of patients.

The ETL system includes a basic library series of exercise tapes, concerned with the production of sounds most frequently misarticulated.

Two definite advantages are already apparent from the research studies:
*1. The correctionist is relieved of administering time-consuming drill, able to devote a greater portion of the class session to individual attention and observation.*
*2. Patients are now able to increase the frequency of their practice sessions although the clinician may not be available for personal instruction.*

ETL invites your request for complete research project reports and MONITOR specifications.

**ELECTRONIC TEACHING LABORATORIES**

**5034 Wisconsin Avenue, Northwest • Washington 16, D. C.**

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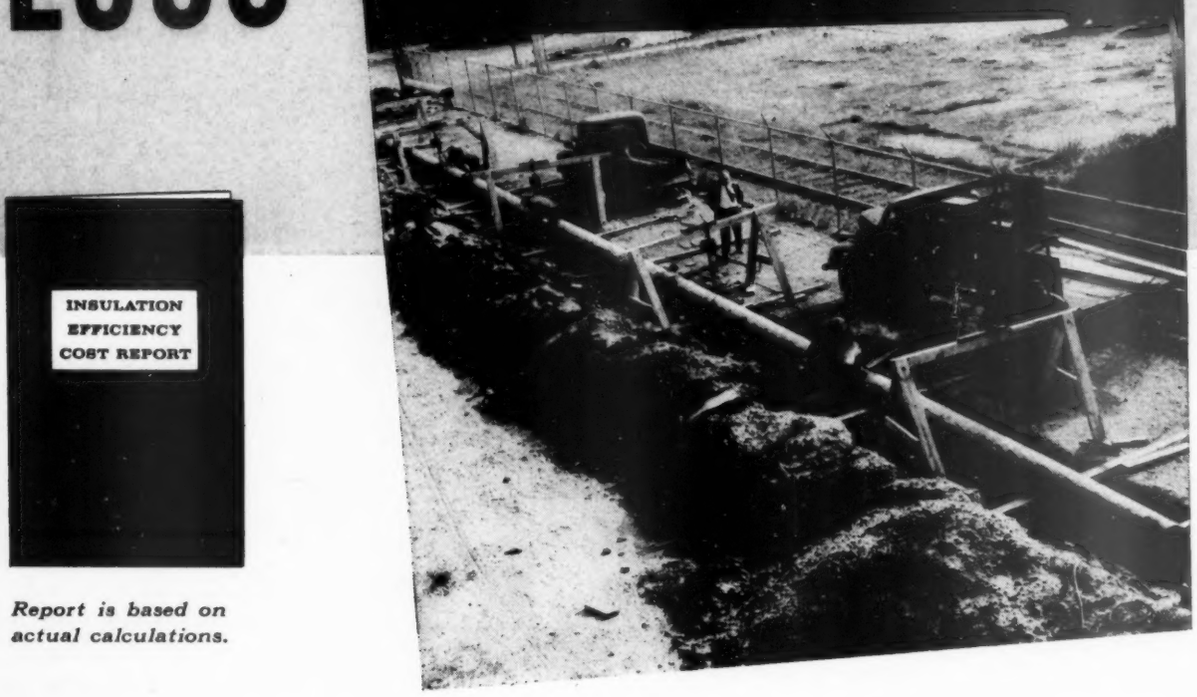
# A 2% HEAT LOSS

## can cost YOU $2,000 a month!






*Report is based on actual calculations.*

The illustrated Insulation Efficiency Report, is a cost comparison study of a Ric-wiL Underground Steam Distribution System vs. a competitive type system. The report is based on actual calculations, using the National District Heating Association's method for determining heat loss. The findings show a 2% heat loss that in one month can cost the owner $2,000.00 in increased steam cost.

The report is yours for the asking . . . and, if you do not already have a Ric-wiL Catalog, ask for a copy along with the report.

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*. . . of Exceptionally High Thermal Efficiency*

RIC-WIL PREFABRICATED INSULATED PIPING SYSTEMS

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# Durcon®
## Laboratory Sinks

**completely resist most every inorganic and organic chemical or solvent used in science and research labs**

Tough Durcon sinks shrug off corrosive attacks of acids, alkalies, salts, solvents and other chemicals used as laboratory reagents . . . do not discolor or stain under the severest kind of service. For most applications, rugged, versatile Durcon 2 is recommended. Special composition Durcon 5 gives excellent resistance to massive amounts of concentrated sulfuric acid and glassware cleaning solution. Where large quantities of hydrofluoric or fluosilicic acids are encountered, Durcon 3 or Durcon 5 is recommended.

All Durcon sinks stand up under hard service without cracking or spalling. Thermal shock has no effect. For further information and prices, contact your Laboratory Furniture Manufacturer or write for new Bulletin PF/5a.

**DESIGN**—Clean, modern, practical with coved corners and dished bottoms makes them highly functional and attractive plus blending with all laboratory furniture.

**CORROSION RESISTANCE**—Made of modified epoxy resin, Durcon exhibits almost complete resistance to wide range of acids, alkalies, salts, solvents, and other organic chemicals.

**WIDE SELECTION**—Table sinks, end sinks, drainboard-sink units, double compartment sinks, cylindrical sinks, cup sinks.

**LIGHT WEIGHT**—Approximately 40% as heavy as competitive sinks. Normally thickness of stone or porcelain sinks is at least 1" while Durcon is but ½" thick.

**LOWER COST**—Besides lower initial cost, there are savings on freight and installation.

**EASIER INSTALLATION**—One man can easily install a Durcon sink either under table top or free standing. No hydraulic jack required as for ceramic or stone sinks. Less weight means less complicated supports.

**HEAT RESISTANCE**—Unlike other plastic laboratory sinks, Durcon will not warp nor soften when exposed to boiling solutions. Neither will Durcon support combustion.

**SHOCK RESISTANCE**—No failure due to thermal shock need be feared. Wide range of tests also assure many years' service without cracking, spalling or other forms of mechanical or fatigue failure.

**MOISTURE ABSORPTION**—Durcon sinks are impermeable to liquids. The percentage of moisture absorption over an extended period is a maximum of 0.06%.

**THE DURIRON COMPANY, INC.**
**DAYTON, OHIO**

DURCO
CORROSION RESISTING ALLOYS & EQUIPMENT

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▪ With over 160 lighting products alone, Westinghouse offers the most complete line of electrical-mechanical products available today. Result: Fewer contacts, less paper work, and a clearly identified single responsibility for the electrical system components in your new school. In partnership with your architect and consulting engineer, Westinghouse can help develop complete lighting and electrical distribution systems that are safe, efficient, practical for today's needs and tomorrow's growth.

Cost of new school construction does not cease with completion of a project, it goes on for the life of the structure as maintenance and replacement costs. Cut these future costs while economizing today. . . . . Call in Westinghouse early in the planning stage. To help cut the cost of education, you can be sure, if it's

# Westinghouse

*Here are a few of the Westinghouse products for your new school*

Air cleaning and handling equipment
Air conditioning
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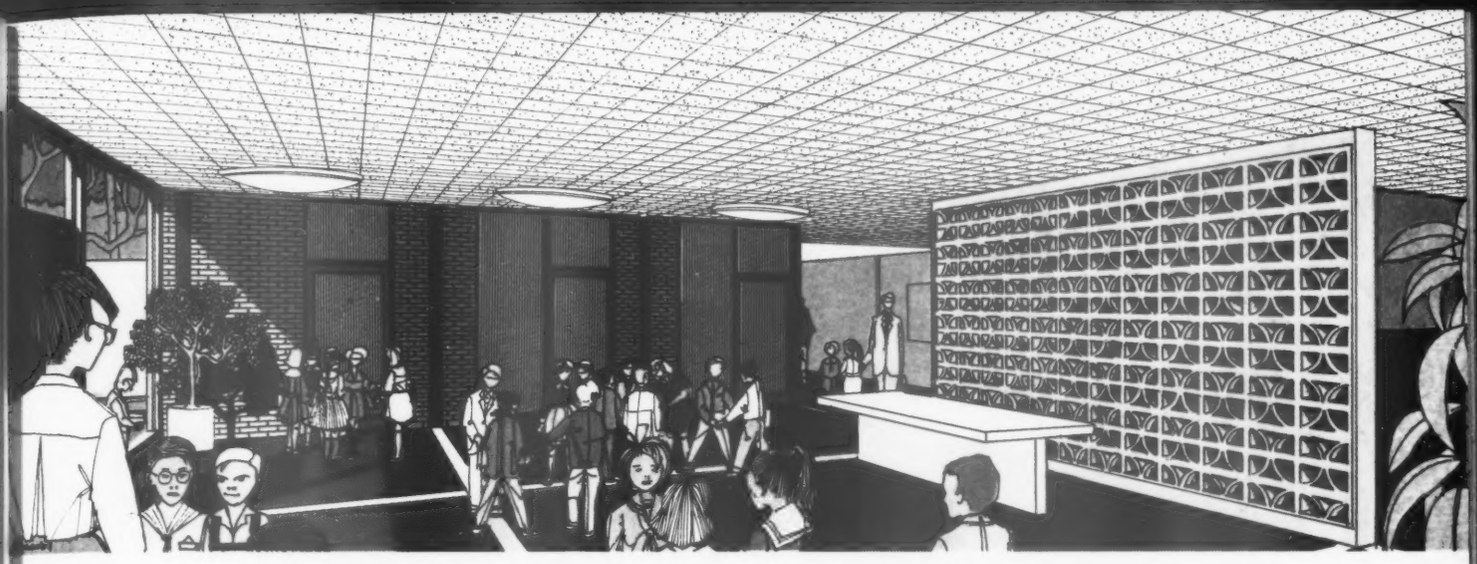
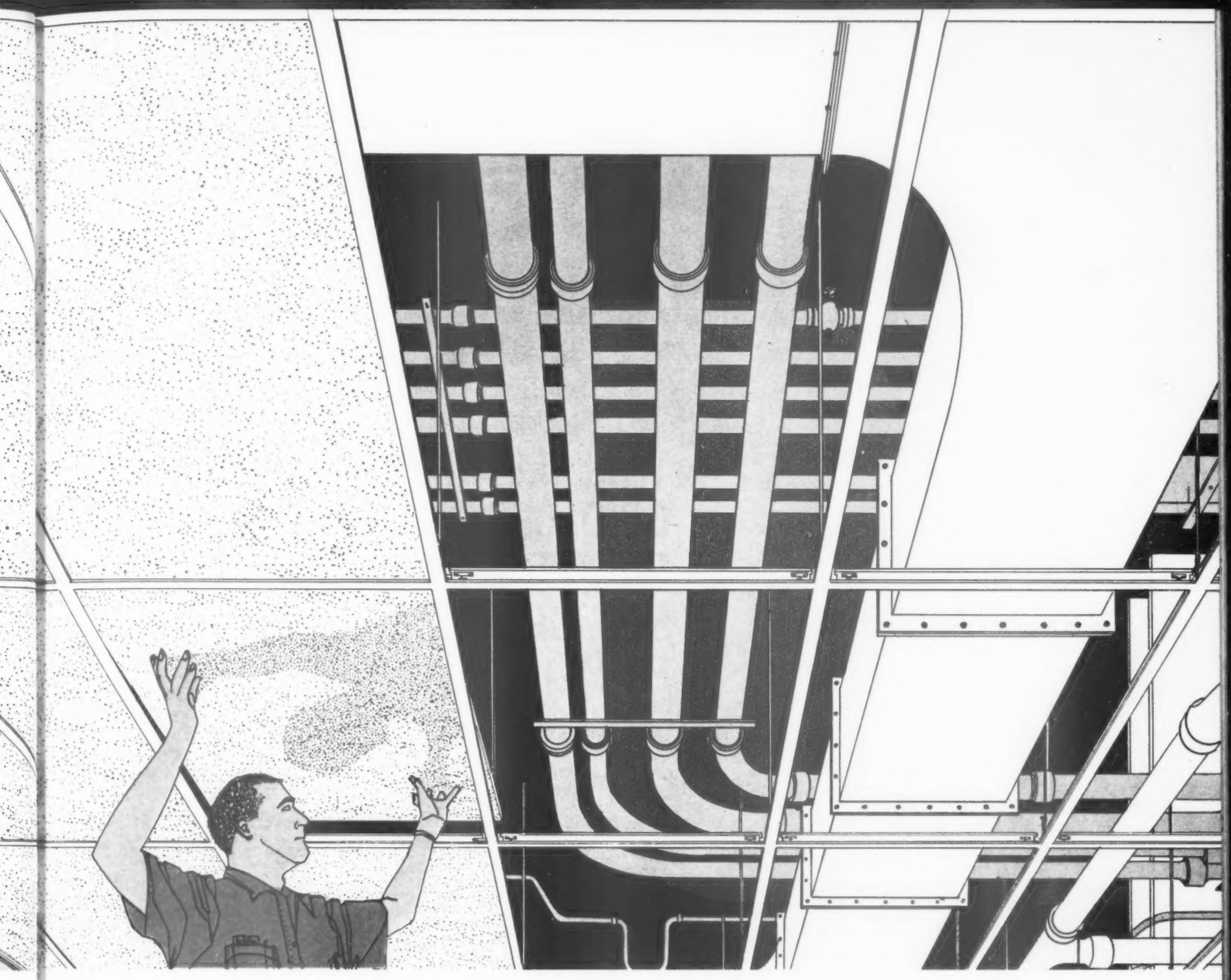


Centennial High School, Circle Pines, Minn. Architects: Ames-Crommett & Associates

Two years ago, Armstrong introduced the first time-design-rated acoustical ceiling tile—Acoustical Fire Guard. Today . . .

# ARMSTRONG ANNOUNCES ANOTHER SIGNIFICANT DEVELOPMENT IN FIRE-RETARDANT CEILINGS

# THE FIRST AND ONLY TIME-DESIGN-RATED ACOUSTICAL LAY-IN CEILING



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Now there is no more economical way to get rated fire protection plus excellent acoustical qualities. It also offers the advantages of complete accessibility, dry installation, insurance savings, and beauty.

Once or twice in every decade, a company will develop a really new building product—a product that completely overhauls the industry's thinking. Two years ago, Armstrong did it with Acoustical Fire Guard tile. Since then, millions of feet of this tile have been installed.

Acoustical Fire Guard meets the nation's strictest fire codes and eliminates the need for costly intermediate protection between a suspended acoustical ceiling and steel structural members. It has saved builders up to six weeks' construction time and up to 30 cents per square foot construction cost.

The new Acoustical Fire Guard lay-in ceiling system goes a giant step further. It combines the advantages of the exposed grid suspension system (economy, fast installation, complete accessibility) with those of a time-design-rated ceiling.

# THIS U.L.-APPROVED GRID CEILING SYSTEM PROTECTS STRUCTURAL STEEL FOR THREE HOURS

Underwriters' Laboratories, Inc., has given this revolutionary ceiling an official beam protection rating of three hours.

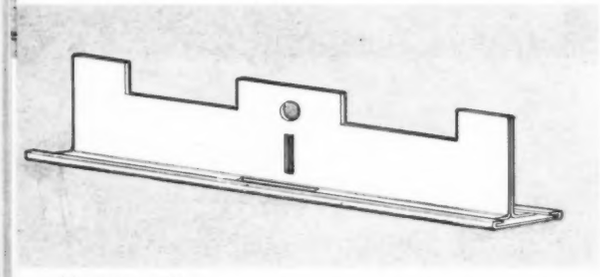
The unique composition of the Fire Guard lay-in unit enables it to maintain spanning strength, even when exposed to flames and 2000-degree heat for many hours. Ordinary acoustical ceiling boards virtually disintegrate under such exposure.

And the grid system is unique, too. Standard grid systems would buckle quickly in the heat of the test chamber. This buckling would drop the lay-in units, thus exposing the structural members to heat and flame. There is no buckling with the Acoustical Fire Guard exposed grid system. The reason: the expandable joints. (See diagrams.) Both the metal members and the lay-in units carry the U.L. Label.

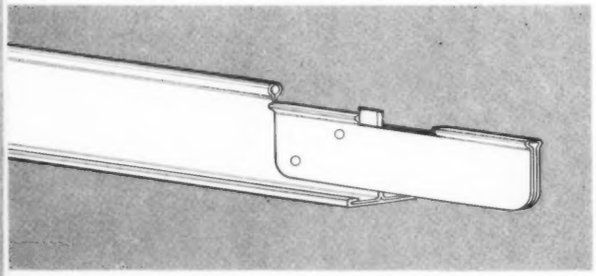
Like the familiar Acoustical Fire Guard tile, the new lay-in system protects the structural components of a building. It combines with a floor structure to help check the spread of fire by resisting the dangerous transmission of heat from one area to another.

In official U.L. tests, the new system—utilizing nominal 24" x 48" x ⅝" lay-in units—earned a beam protection rating of three hours. Assemblies using bar joist and slab as well as beam and steel floor construction earned official U.L. floor-ceiling ratings of two hours.

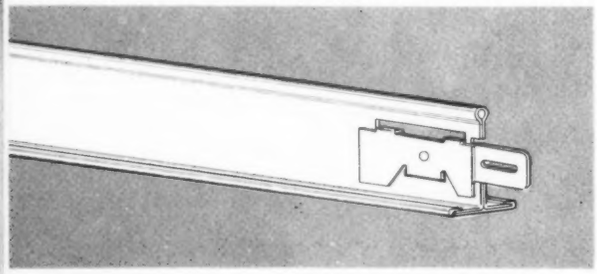
And in either the new lay-in system or in tiles, Acoustical Fire Guard may be used with a variety of construction forms to meet building code or insurance rating requirements. Variations from tested assemblies which maintain or improve the fire-retardant rating have been accepted by local code officials, building inspectors, and rating agencies.



Hanger splice

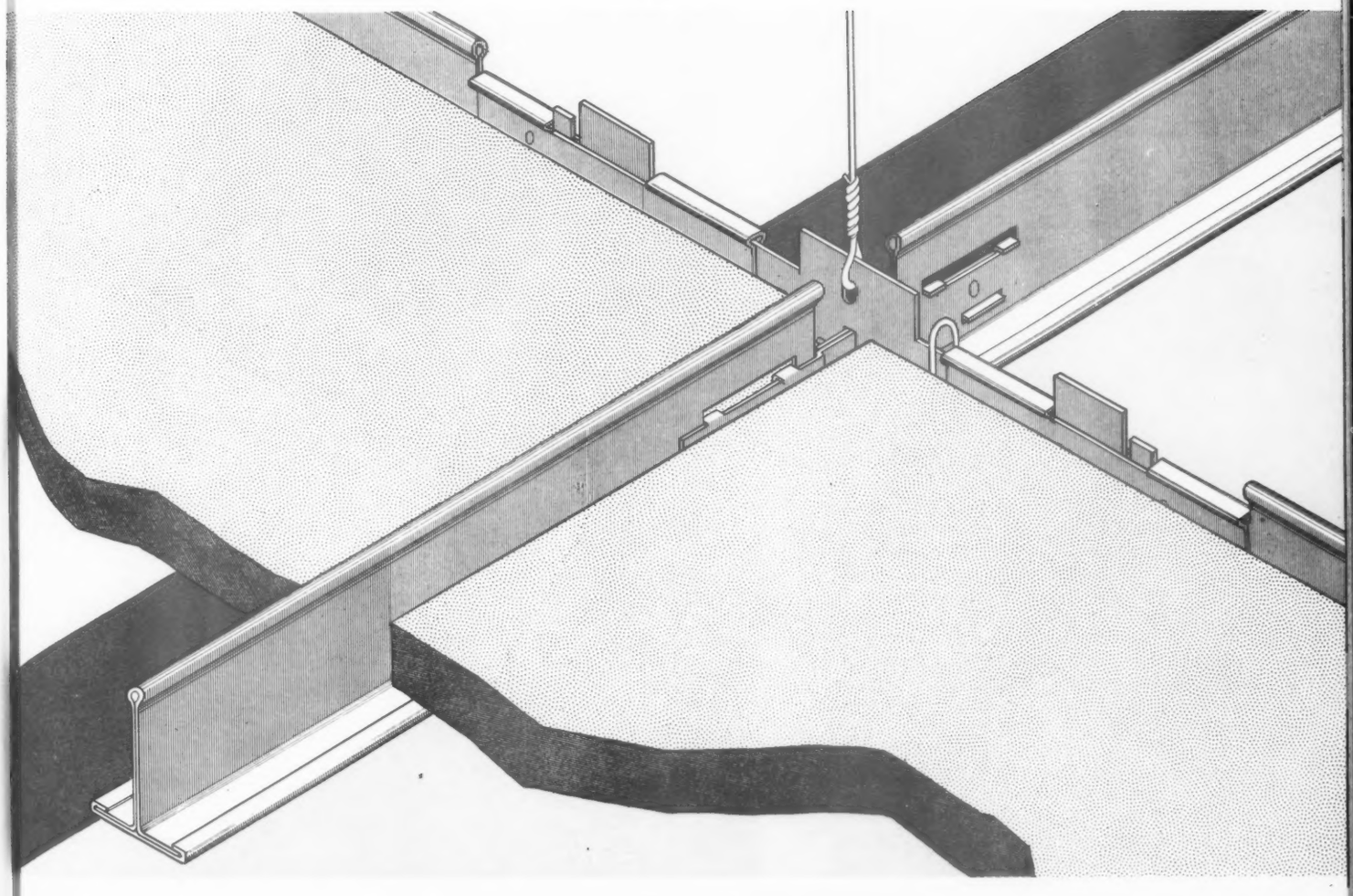


Main tee



Cross tee

Acoustical Fire Guard lay-in units can withstand 2000-degree heat for prolonged periods. The suspension system is designed to permit expansion of metal runners when exposed to intense heat and flame.



# SAVE MONEY AND CONSTRUCTION TIME

Acoustical Fire Guard lay-in system reduces labor and material costs, insurance premiums, maintenance charges—and it speeds both new and remodeling projects.

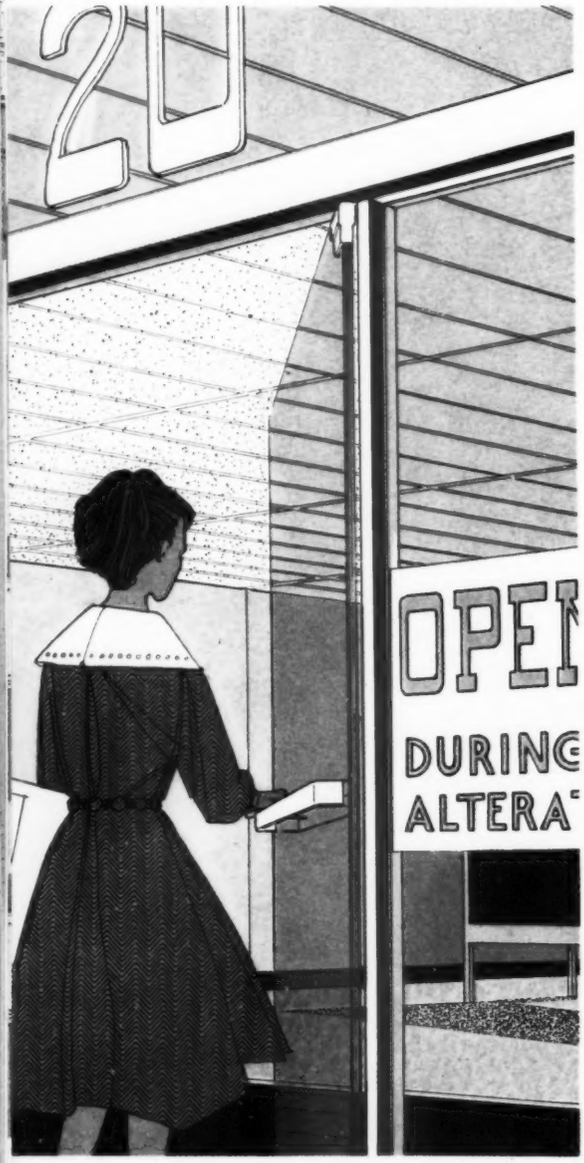
Armstrong Acoustical Fire Guard lay-in ceilings are more economical than other finished ceilings that will provide two- or three-hour protection for structural steel. In most cases, they will cost even less than ordinary plaster ceilings on metal lath.

Not only is the cost of the units and the metal members low, but labor costs are lower because the large units are easy to handle and install.

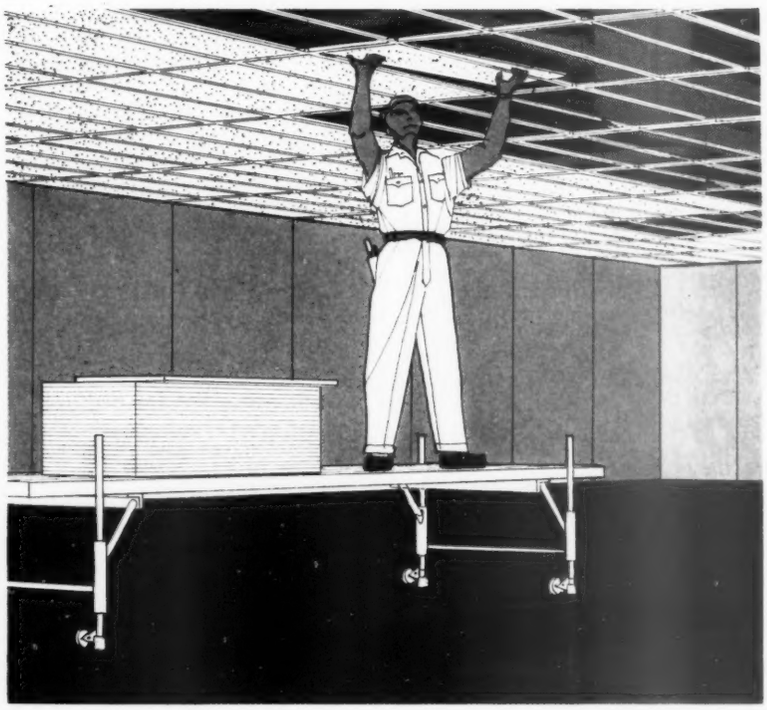
Savings do not end with installation. Maintenance is minimized. Insurance companies recognize rated fire protection with lower premiums on a building and its contents.
Because there is no messy wet operation which requires extensive cleanup, this product is ideal for remodeling jobs. Installation can be done during or after office or school hours. Stores continue to earn revenue during the installation.

Acoustical Fire Guard helps builders to meet deadlines in another way. Other trades (such as carpenters, flooring contractors, and painters) can be on the job at the same time as the acoustical contractor. There is no waiting for wet work to dry. This alone can save weeks. When combined with the other time-saving advantages of Armstrong Acoustical Fire Guard lay-in units, the saving can amount to *two months or more.*

Excellent for remodeling jobs

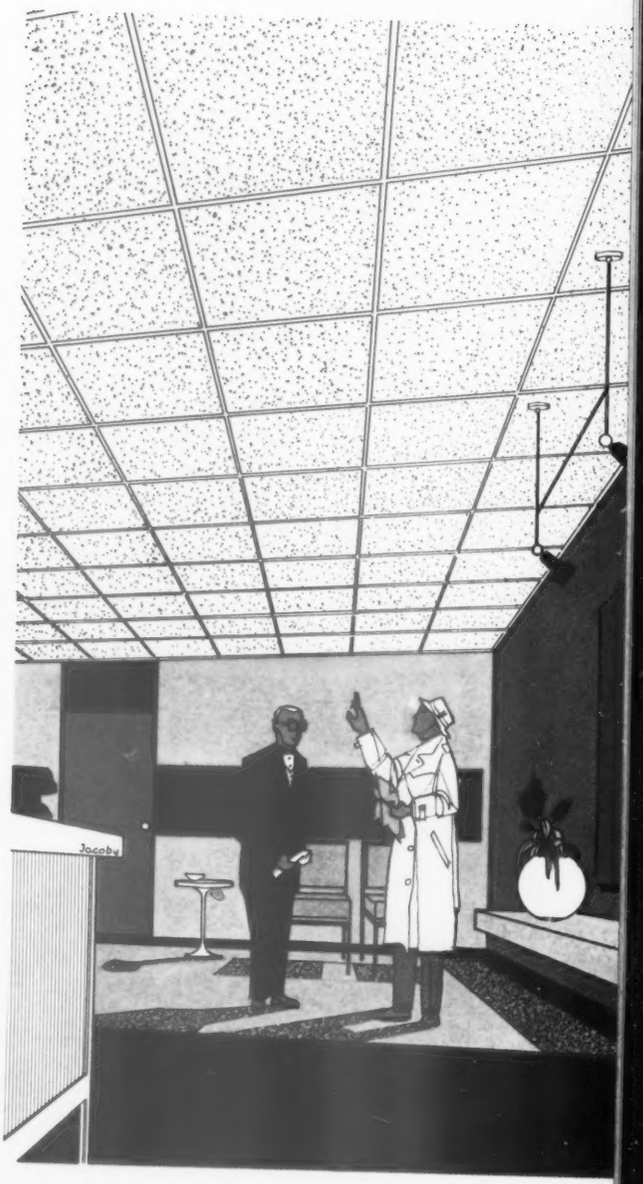



Large units go in fast and dry

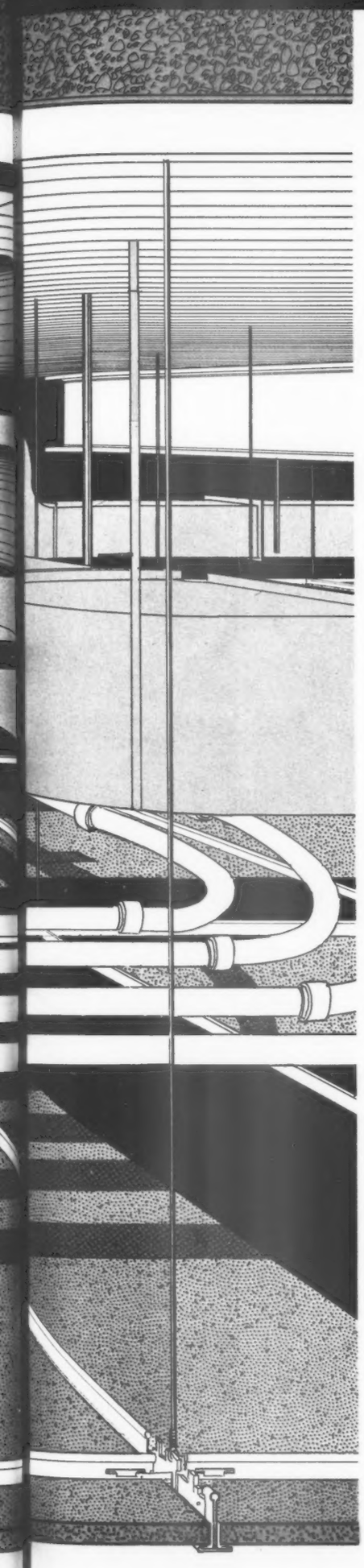


Other trades can be on the job

Protection cuts insurance rates



Jacoby



# THE NEW ACOUSTICAL FIRE GUARD SYSTEM ALLOWS COMPLETE ACCESSIBILITY

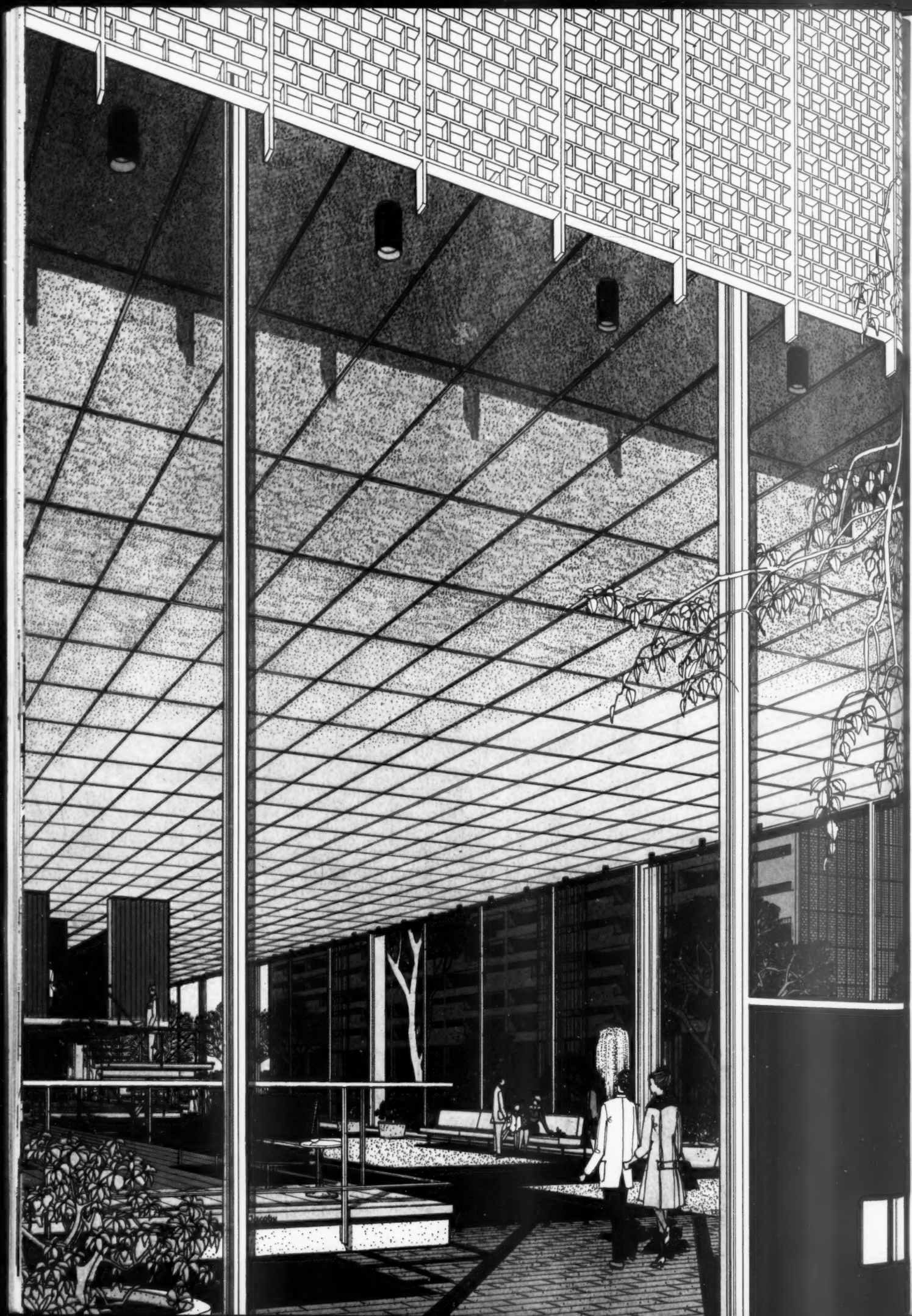
The Acoustical Fire Guard grid supports the panels on all four edges. The units can be lifted out for complete access to any part of the plenum chamber.

Because of the maze of pipes, ducts, and electrical equipment installed above the suspended ceilings of today's buildings, accessibility has become an important consideration in specifications. The only way to gain access through an old-fashioned plaster ceiling was by expensive access doors or by breaking through the ceiling when an emergency arose.

The Acoustical Fire Guard exposed grid system provides 100 per cent accessibility to the areas above the ceiling. Each panel is supported on all four edges. Every board can be lifted out in seconds.

The new Acoustical Fire Guard lay-in units are available in two nominal sizes: 24″ x 24″ and 24″ x 48″.

Lift out any units to afford immediate accessibility to the plenum chamber



Arc
ren

# BRINGS BEAUTY TO A BUILDING'S INTERIOR

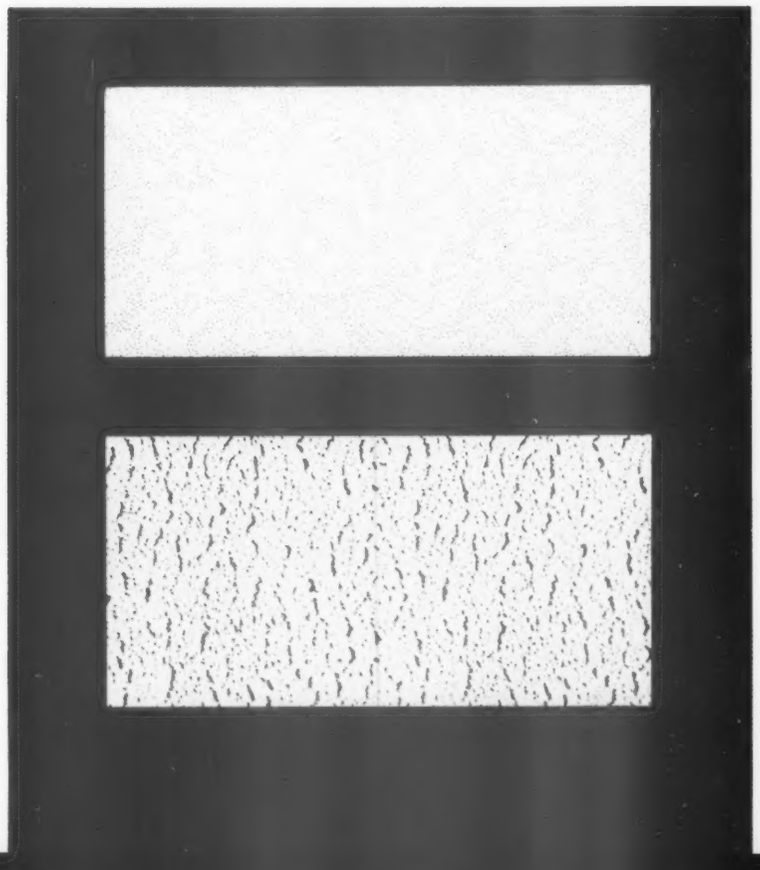
The room on the left has an Acoustical Fire Guard lay-in ceiling in the Classic design. The lace-like pattern of tiny perforations gives a smooth, free-flowing effect to the ceiling. Classic has been the most copied design in the history of the ceiling industry — ever since its introduction in 1958 by Armstrong.

Acoustical Fire Guard lay-in units will soon be available in the Fissured design. The attractive fissured surface is a traditional choice wherever ceiling appearance is a primary factor. The fissures resemble the look of travertine marble.

In addition to being an efficient sound absorber, Acoustical Fire Guard—because of its density and composition—can be used with ceiling-height partitions to minimize room-to-room sound transmission problems.

And Acoustical Fire Guard's white surface reflects light evenly, without glare. This ceiling has a light reflectance of "a" (over 75%). The exposed surface of the metal suspension members is available in two finishes—painted white, to match the ceiling boards, and anodized aluminum. Either finish contributes to a modern look for an interior.

Since the Classic and Fissured designs are identical in both the lay-in units and the tile, they can be combined in different areas of the same building.



Architectural designs and renderings by Helmut Jacoby

# SPECIFICATIONS FOR Armstrong ACOUSTICAL FIRE GUARD CEILINGS

## JOB CONDITIONS

Acoustical materials shall be installed under conditions as outlined in the current bulletin of the Acoustical Materials Association.

## SPECIAL CONDITIONS

Armstrong Acoustical Fire Guard shall be installed only by an approved Armstrong acoustical contractor.

## MATERIALS

a. Acoustical ceilings shall provide (one, two, three) hours' protection for structural steel as rated by Underwriters' Laboratories, Inc.

b. Acoustical contractor shall submit, as a part of his bid proposal, written substantiation of the rating from Underwriters' Laboratories, Inc.

c. Acoustical lay-in units where specified shall be nominal (24" x 48", 24" x 24") x ⅝" in size. Acoustical tile where specified shall be 12" x 12" x ⅝" in size with interlocking and self-leveling tongue-and-groove edges on four sides. Acoustical units shall have a factory-applied washable white finish with a light reflectance of "a" (over 75%). Acoustical units shall be provided in the following surface detail:

Armstrong Fissured Acoustical Fire Guard—Federal Specifications SS-A-118b, Type III, Class A (Incombustible)—Carrying Underwriters' Laboratories, Inc., Label for Fire-Retardant Classification.

Armstrong Classic Acoustical Fire Guard—Federal Specifications SS-A-118b, Type IIB, Class A (Incombustible)—Carrying Underwriters' Laboratories, Inc., Label for Fire-Retardant Classification.

d. When acoustical lay-in units are specified, suspension system shall be Armstrong Acoustical Fire Guard exposed grid system as shown in the Underwriters' Laboratories listing of the time-design-rated ceilings. Suspension members shall be finished in (white, anodized aluminum) and shall be of the proper dimension to support the size of Fire Guard lay-in units specified. Suspension system shall carry U.L. Inc., Label for Fire Retardant Classification. Where acoustical tiles are specified, suspension system shall be concealed zee system.

## INSTALLATION

a. Installation of suspension system. The acoustical contractor shall furnish and install (Armstrong Acoustical Fire Guard exposed grid system, concealed zee system). The system shall be installed in the pattern as shown on the drawings. The system shall be installed in strict accord with the manufacturer's recommendation and in such a manner as to achieve the specified fire-retardant time-design rating. System shall be installed to permit border units of greatest possible size.

b. Installation of acoustical material. The acoustical contractor shall install Armstrong Acoustical Fire Guard in the types, sizes, and surface designs specified above or in the drawings. The acoustical units shall be installed in strict accord with the manufacturer's recommendations and in such manner as to achieve the specified fire-retardant time-design rating.

## NOTE:

Complete specifications and detailed working drawings are available from your Armstrong representative or your approved Armstrong acoustical contractor.

## Armstrong District Offices

ATLANTA 8, GA.
727 West Peachtree St., N. E.

BOSTON, MASS.
200 First Avenue,
New England Industrial Center,
Needham Heights 94

CHARLOTTE 3, N.C.
1127 East Morehead Street

CHICAGO 34, ILL.
6535 West Irving Park Road

CINCINNATI 37, OHIO
1057 Meta Drive

CLEVELAND 14, OHIO
2975 Superior Avenue

DALLAS 19, TEXAS
2727 Oak Lawn Avenue

DENVER 4, COLO.
35 West Fifth Avenue

DETROIT 26, MICH.
Free Press Building,
321 Lafayette Avenue, West

KANSAS CITY 8, MO.
500 West 26th Street

NEW YORK 16, N.Y.
295 Fifth Avenue

PHILADELPHIA 2, PA.
Robinson Building,
15th and Chestnut Streets

ST. LOUIS 10, MO.
1919 Hampton Avenue

SAN FRANCISCO, CALIF.
1814 Ogden Drive,
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SEATTLE 9, WASH.
221 Minor Avenue, North

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6911 Decarie Boulevard,
Montreal 29, Quebec

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**ACTIVITY TEAM** Built for long distance performance and fast highway work, the ALL AMERICAN makes field activity trips and athletic trips with ease. Approval on the ALL AMERICAN play on the activity team comes from pupils, teachers and coaches.

**SCHOOL BUS TEAM** With the increased load capacity, there is the possibility of using less buses to do the same job or releasing smaller buses for use elsewhere. The short turning and steering lets the ALL AMERICAN go where old style bigger buses cannot go. The pupils, drivers and bookkeepers "OK" the ALL AMERICAN for the school bus team.

**SHOP SERVICE TEAM** For routine checks or for upkeep work, shop men like the standard engines and chassis parts that are available locally. Engine location allows driver to know of any engine difficulties which can help to prevent major damage. Shop men and bookkeepers are happy to have the ALL AMERICAN on their team.

For more information on how the All American can reduce your transportation cost—write for catalog "A".

BLUE BIRD

PLANTS: FORT VALLEY, GEORGIA and BRANTFORD, ONTARIO, CANADA

(Circle number 790 for more information)

# MUST PUPILS BE TAUGHT TO SEE?

Yes...in the sense that they must learn about the various factors involved in the proper use of light and sight.

Because the relationship of light and sight is not an established part of the school curriculum, teachers pursuing the subject rely heavily on Better Light Better Sight Bureau supplementary teaching aids. These aids – sponsored by industry and developed after consultation with representatives of the National Education Association–have proved particularly valuable in the study of light and sight. Educators indicate that such classroom aids do much to facilitate student understanding, ease teaching work, and heighten interest in a most fascinating subject. What's more, the aids are better able to present *timely,* intriguing material not normally found in standard textbooks which cannot keep up-to-date with fast-paced developments in this specialized field.

**PREPARES TEACHING AIDS**

Last year, the Better Light Better Sight Bureau distributed about 40 tons of supplementary classroom aids to more than 8,000 teachers throughout the country. The Bureau is a national, non-profit organization founded in 1934 under the sponsorship of the electric industry to foster, through educational means, a better public understanding of light as an important contributing factor to sight in homes, schools, offices and industry.

The Better Light Better Sight Bureau serves America's educational systems by offering to educators a variety of classroom materials including posters, leaflets, quiz sheets, films and guide books to assist in teaching "the facts of light."

**FOUR SPECIFIC PROGRAMS**

The Bureau's material is divided into four different programs for four different school areas: (1) Elementary (4th, 5th and 6th grades); (2) General Science and Health classes; (3) Home Economics classes; and (4) Industrial Arts classes.

If you are an administrator interested in learning more about the supplementary classroom programs now being made available to teachers by the Bureau, please write:

**BETTER LIGHT BETTER SIGHT BUREAU**

DEPT. SM-52, P.O. BOX 1647,
GRAND CENTRAL STA., NEW YORK 17, N. Y.

(Circle number 708 for more information)


*A sampling of correspondence across the editor's desk.*

## Proper use is not abuse

SIR: The public address system is an efficient assistant for any administrator. But if abused, it has no place in a school. (*See, "Teachers rap abuse of public address systems," SM, Oct. '60.*) Our schools exist so that teachers may teach. Even a principal has no real authority to interrupt classroom study.

The thoughtful administrator will establish a set time for announcements —and never deviate from it except in emergencies. (In our school, all staff members know that public address announcements are made at 8:40 a.m. and 12:40 p.m.) He will also prepare a teacher's memo for each member of his staff no later than Monday morning of each week. The memo, which includes all activities for that week, supplements the school calendar listing major activities for the year.

It is important to keep the staff informed but not at the expense of classroom teaching. A set time for public address announcements will prevent the abuses complained of by teachers in your article.

CLAIR T. BLIKRE
SUPERINTENDENT OF SCHOOLS
STANLEY, N. D.

## The end is not yet

SIR: The November, 1960 issue of SCHOOL MANAGEMENT carried in the section "News of Schools," a short report on "A ban on sweets causes drop in school meals." All of your data in this article is correct with the exception that the board of education has *not* abandoned the experiment. The experiment is continuing on a month to month basis until a final decision is reached by the board.

R. E. OHLZEN
ASSISTANT DIRECTOR OF LUNCHROOMS
BOARD OF EDUCATION
CHICAGO, ILL.

## Time for cleanup

SIR: In your review of year-round schools (*SM, Nov. '60*) one pertinent factor has been omitted from the discussion of the true 12-month per year use of school buildings. I refer to the statement, "Theoretically, the same school plant, staffed by the same number of personnel, provides for the education of 25% more students."

If a school is to be used in this fashion, it is not possible to schedule the building to capacity since a certain percentage of the teaching area must be regularly scheduled for routine and special maintenance.

WARREN M. DAVIS
SUPERINTENDENT
UNION COUNTY REGIONAL
HIGH SCHOOL DIST. #1
SPRINGFIELD, NEW JERSEY

## Build up, not out

SIR: I have just read two articles from your magazine (*"Single story vs. multi-story, which is cheaper?" SM, May '58 and "Are one story schools more expensive to build?" SM, Feb. '59*). In response, I shall limit my discussion to the merits of a multi-story building solely in terms of structural cost.

In comparison, it is obvious that the quantity of excavation, length of foundation, and area of roofing is favorable to the multi-story scheme in almost direct proportion to the number of stories involved. Any increase in foundation wall and footing sizes for a multi-story building are very slight due to the minimum practical and code allowable sizes. It also takes the same amount of labor and form work to pour a twelve-inch thick wall as a ten-inch thick wall.

The decrease in roof and foundation areas signifies the saving in both heat loss and in the running of utility lines. In a school of any size it is necessary to arrange your toilet and mechanical facilities in various use centers. When these can be vertically "stacked," there is considerable saving over a one-story, spread out scheme.

Not all arguments can be in favor of the multi-story scheme.

It is less expensive to pour a concrete slab on the ground than to raise the floor into the air. In framing lies the main cost advantage for a single story school.

Finally, I wish to refute the argument often used in favor of a single story building, namely, the elimination of vertical circulation of stairs. Classrooms cannot be attached one to

George Meili—shown at the new New Jersey Levittown Jr., Sr. High—has been servicing schools for 12 years.

*A man like*

# George L. Meili

*can be your authority on school sanitation and maintenance problems*

## He is one of West Chemical's 457 school experts who offer you free personalized technical service

**LASTINCOTE #7®** gym floor finish gets endorsement of Levittown School Superintendent John A. Mongon (center). Meili reminds Coach Joseph Diminick (right) that long-lasting, easily-maintained Lastincote #7 preserves natural wood finish—without glare—won't darken, reduces scuffs and rubber marks.

**WESTROLL®** towels and cabinets mean lower maintenance costs for Chief Custodian Patterson. Meili shows how tamper-proof, metered cabinets (loaned free) reduce towel costs up to 40%.

**WESCODYNE®** hospital-tested germicidal-detergent is discussed by Meili and head nurse McLarney. With the "flu season" approaching, George recommends West procedures for maximum protection.

A technical expert like George Meili can analyze your requirements, help you get more for your maintenance budget. He's experienced at solving problems with an efficient West Maintenance Program. He works with your staff — gives free instruction, free supervision and free periodic follow-up.

He can guarantee improved appearance and higher sanitation standards . . . and show you how to *reduce* maintenance costs! For full information write your nearest West office or West Chemical Products, Inc., 42-16 West St., Long Island City 1, N. Y. In Canada, 5621-23 Casgrain Ave., Montreal.

*America's foremost specialists in school sanitation and maintenance*

WEST CHEMICAL PRODUCTS INC.

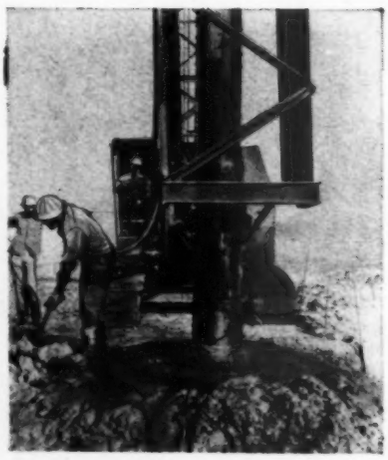
(Circle number 801 for more information)

Architect: Paul Rudolph, New Haven, Connecticut
Engineer: Sidney Barker, Tampa, Florida
Contractor: J. L. Coe Construction Co., Charlottesville, Virginia

PHOTO BY EZRA STOLLER

# Vibroflotation®

## was used to compact the sandy soil at Sarasota Senior High School



Vibroflot machine in action. Each compaction consumed 3 or 4 tons of sand.

The foundations for the new Sarasota Senior High School, Sarasota, Florida, were built on sand compacted by Vibroflotation. 260 compactions were made to an average depth of 13 feet.

Vibroflotation provided a substantial savings over piling foundation solution. Additional savings were realized through elimination of all formwork for footings.

Proven applications of foundations upon sand total 100+ contracts throughout the U. S. A. and Canada.

Write for Booklet S-26

**VIBROFLOTATION FOUNDATION CO.**

**930 FORT DUQUESNE BOULEVARD, PITTSBURGH 22, PA.**

(Circle number 776 for more information)


the other along an infinite length of corridor (state law limits to 200 feet). They must be broken into reasonable units.

These units must be attached one to the other. In our New England climate it is desirable to have these connections enclosed thereby making it more economical to attach them by means of stairs than to provide extended corridor connections.

Specifically, though costs may vary from year to year, I believe our multi-story schools will continue to show a structural economic advantage over our single story schools.

WILLIAM W. DRUMMEY
ARCHITECTS-ENGINEERS
BOSTON, MASS.

### Merit pay divisive

SIR: There has been so much said in favor of merit pay for teachers that perhaps the other side should have some attention. Merit rating might improve the services of good teachers. Everyone appreciates added compensation and is willing to put forth even greater effort to get it.

But the essential problem lies with poor teachers, those who would most probably not receive any merit awards for their performance. Can we hope to improve their performance by making them more disgruntled?

Morale and motivation are the tools with which we can encourage unambitious teachers into positive action. Merit awards would largely destroy both by awakening petty jealousy, bickering and general discontent. They automatically split a staff into those who are recognized as superior and those who are branded as inefficient—and an individual tends to live up to his reputation.

Merit awards are valid and justifiable in principle. However, as long as one cannot discharge the inferior teacher, then merit rating is a pernicious tool for discord in the schools. The school administrator must, of necessity, be a good psychologist. He must be able to exploit the best qualities of each individual employed in his schools and build upon them by encouragement, not by discriminatory rewards.

In short, the merit device has failed to accomplish the most important task of our schools: The development of all teachers into personnel worthy of their profession.

DR. PAUL J. GELINAS
SUPERVISING PRINCIPAL
UNION FREE SCHOOL DISTRICT NO. 2
SETAUKET, N.Y.

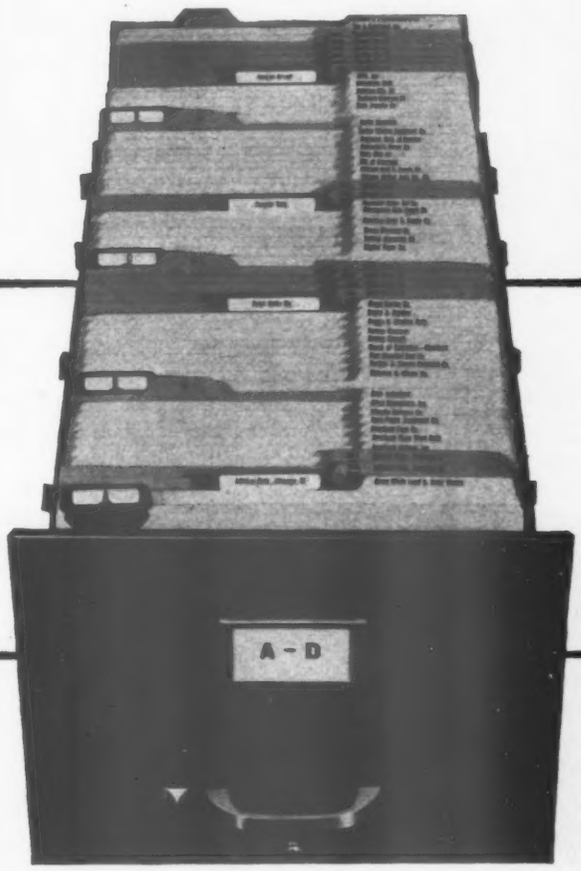
# How to have all the facts about all the students always at your fingertips!

**Amazing Postindex Cumulative School Record Systems detail entire past history of each student on one record card.**

With Postindex forms, information is kept current, presented in logical sequence and is always readily accessible. The ease of filing and finding saves time, cuts costs.

Postindex Cumulative Record Cards include physical reports; personal information; educational history; and results of personality, mental, health or achievement tests. Available in varied sizes, classifications and methods of posting to fit your individual needs.

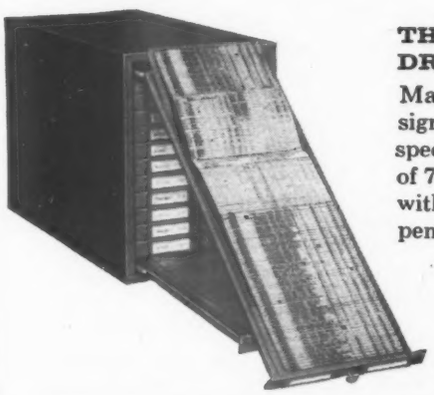
Write for sample forms and a copy of our free booklet, "Modern Records for Schools."




**THE WABASH DIRECTOR LINE SYSTEM speeds filing and finding . . . reduces misfiling**

*It's a streamlined technique.* You find with the eyes instead of the hands. Every tab for every filing category is in a straight line. No tab obscures any other . . . a quick glance, and you've found the right folder.

*Economical to expand.* To increase the size of your Wabash Director Line Indexing System, you just add additional guides and folders. No need to throw away old ones. Practical for large or small, complex or simple filing systems.



**THE POSTINDEX DRAWER CABINET**

Made in seven styles, each designed to meet a wide range of specific needs. Available in units of 7, 9, 12, 13, 18 and 20 drawers with new, improved slide suspension.

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# How Day-Brite lighting helps a school prepare for tomorrow

The "little red school house" was fine in its day, but future demands on our educational system require a new kind of educational plant. This high school, incorporating some of today's most forward-looking architectural concepts, promises to remain modern and efficient for years to come.

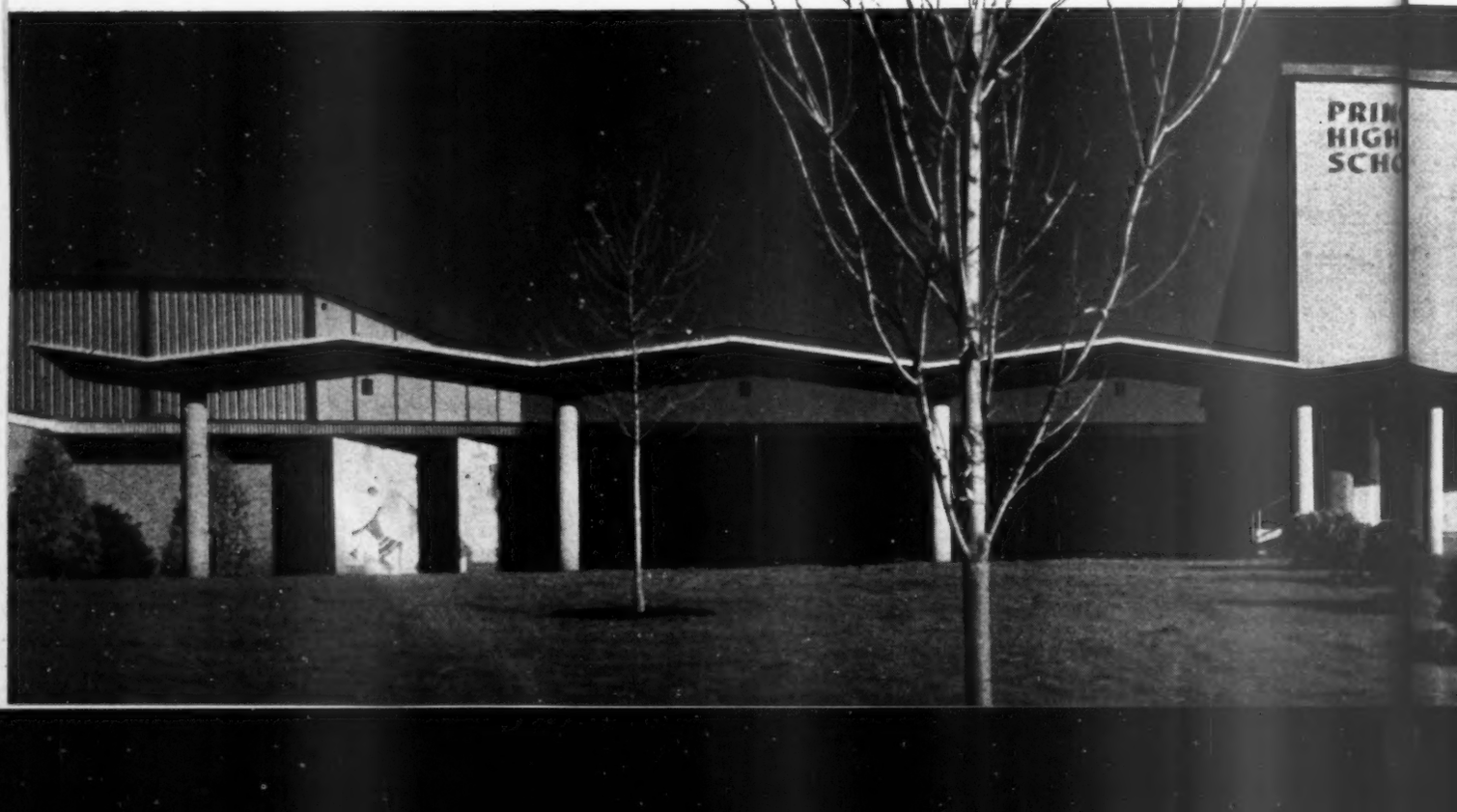
With great attention given to both form and function throughout, Day-Brite was the logical lighting choice. Semester after semester after semester, these fixtures will provide highest visual comfort with substantial long-range operating and maintenance economies.

If a school building or remodeling project figures in your "tomorrow", consult your Day-Brite representative about the lighting designed with "tomorrow" in mind. *Day-Brite Lighting, Inc., 6260 N. Broadway, St. Louis 15, Mo. and Santa Clara, Calif. In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ont.*

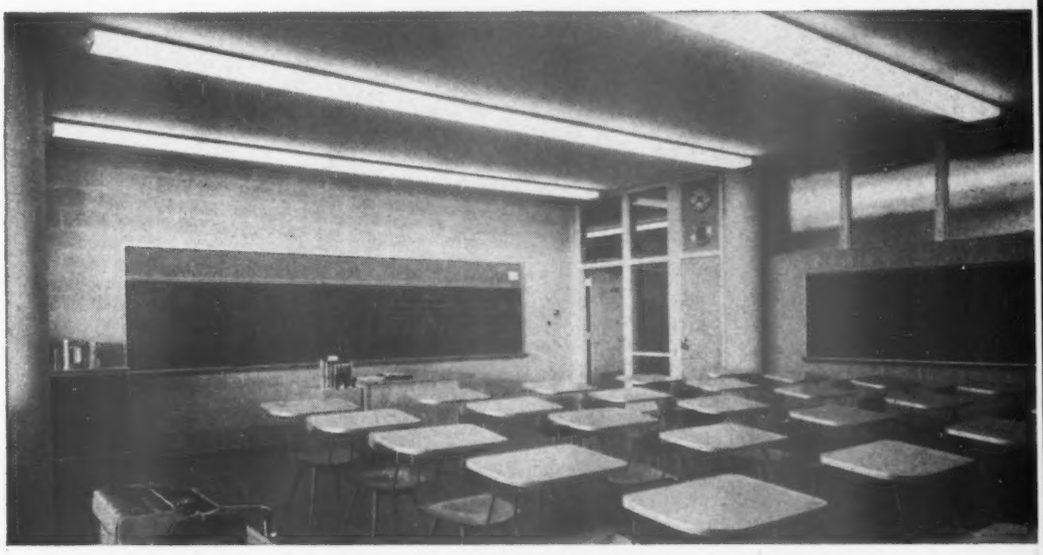
"Write today for free 16 page booklet on Modernization and Re-Lighting. Dept. S, 6260 North Broadway, St. Louis, Missouri."

DAY-BRITE

NATION'S LARGEST MANUFACTURER OF COMMERCIAL AND INDUSTRIAL LIGHTING EQUIPMENT



Superb Day-Brite Holiday fixtures maintain a minimum lighting level of 70 footcandles.



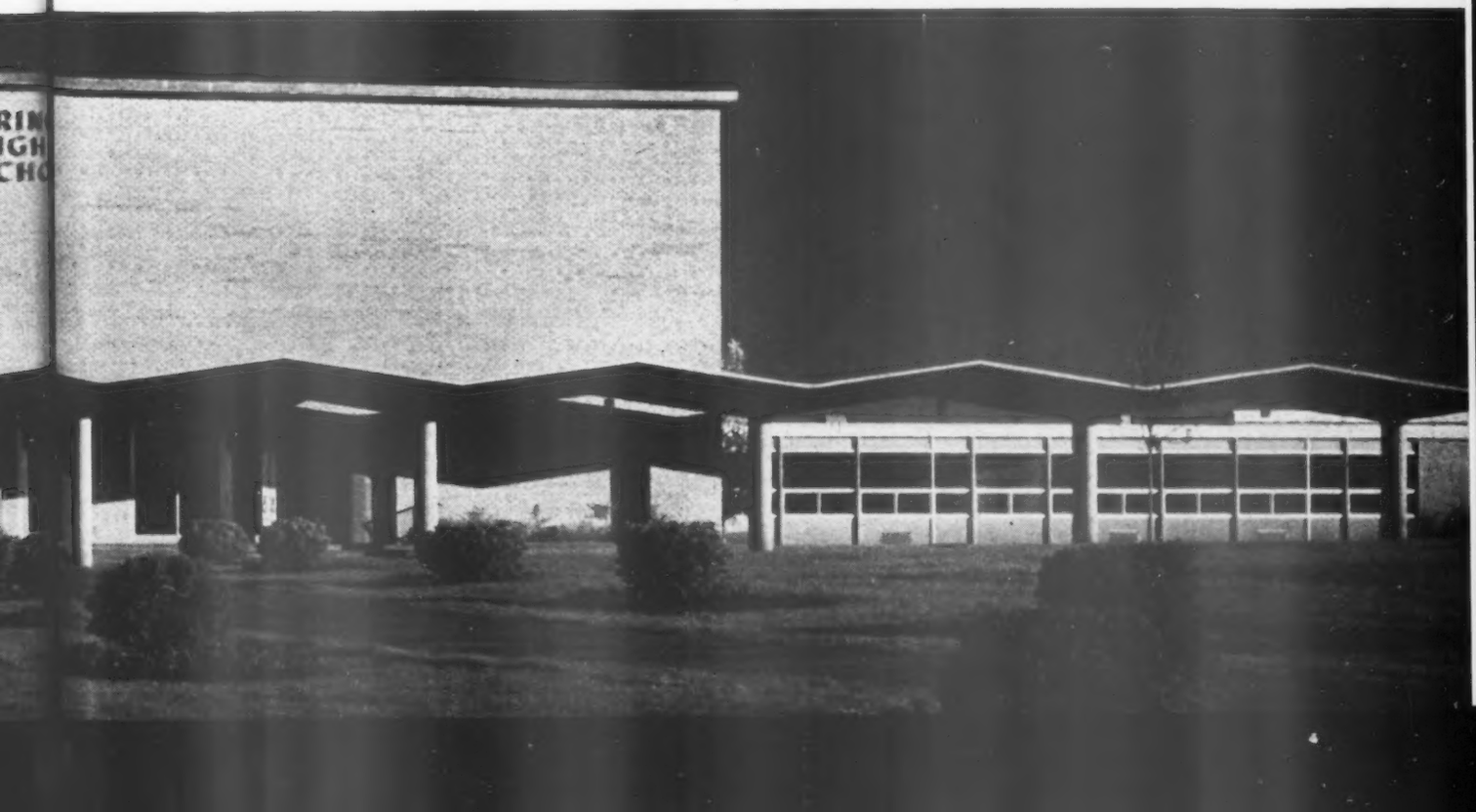
Molded acrylic plastic enclosures control light prismatically, eliminating glare.

***Princeton High School,***
*outside of Cincinnati*

***Architect:***
*Potter, Tyler, Martin and Roth*

***Consulting Engineer:***
*Fosdick and Hilmer*

***Electrical Contractor:***
*Beltzhoover Electric Co.*



# YOURS FOR THE ASKING

This material—promotional and otherwise—contains ideas of possible value to you and your schools. Each item listed will be sent to you without cost.

**FOR FREE COPIES, USE READER SERVICE CARD**

**Graph sheet catalog.** This publication by Keuffel & Esser Co. lists graph sheets, many in color, and offers help on the selection of grid patterns best suited to specific applications. Graphs for administrative and class use are included.

*For a free copy of this catalog, circle number 842 on the Reader Service Card.*

**Test your custodians.** A pamphlet published by the Puritan Chemical Co. includes sanitation tests to be given to custodians at the time of hiring or as part of a training program. Copies of three actual tests are included. Each consists of 20 true-false questions and three practical performance demonstrations in which the custodian uses housekeeping tools to perform a common task.

*For a free copy of "Sanitation Tests for Custodians," circle number 827 on the Reader Service Card.*

**Encourage science students.** Tested classroom methods which encourage "learning by doing" are included in this paperback volume titled, "Laboratories in the Classroom." Twenty-seven educators have listed specific subject matter ideas in math, physics, biology, chemistry and elementary science. One chapter, for example, is titled, "Teaching Science Through Toys."

*For a free copy of this book, circle number 828 on the Reader Service Card.*

**Water heater selection chart.** This chart will enable you to select with accuracy a commercial water heater which supplies enough sanitizing rinse water for each classification of dishwashing machine. Published by the Ruud Mfg. Co., the chart was developed in cooperation with the National Sanitation Foundation.

*For a free copy of the chart, circle number 838 on the Reader Service Card.*

**Lab instrument catalog.** An illustrated catalog by Arthur S. LaPine & Co. gives specifications and prices of a variety of science laboratory equipment and instruments. Among the listed items are spectrophotometers, pH meters, electrobalances, recorders, exchangers and test machines.

New items include a steam distillation apparatus for the determination of fluorine, flexible globe cabinets, small and large hot plates with variable temperature controls, and heated vacuum dessicators. Another featured item is a foot-operated glass blowing burner.

*For a free copy of this catalog, circle number 825 on the Reader Service Card.*

**Folding, portable products.** A brochure prepared by the Hamilton Mfg. Co. lists its complete line of folding and portable products for cafeterias, auditoriums, gymnasiums and recreational areas. Also included are suggestions for equipping multi-use space. The catalog presents folding tables, choral risers, bandstands, stages, runways, etc.

*For a free copy, circle number 844 on the Reader Service Card.*

**Porcelain enamel wall panels.** An eight-page folder from the Caloric Appliance Corp. gives specifications on 16 standard types of porcelain enamel wall panels, and discusses the advantages of this style of wall construction. Photos of school installations are shown. The booklet also describes a porcelain enameled, corrugated building material to be used for roofing and siding.

*For a free copy of this booklet, circle number 831 on the Reader Service Card.*

**Conversion chart.** A wall chart of conversion factors is being made available by the Precision Equipment Co.

The chart covers such conversions as inches to centimeters, watts to horse-power, cubic feet to liters, microns to meters, etc. Size is 8½ by 11½ inches.

*For a free chart, circle number 895 on your Reader Service Card.*

**Wireless microphone system.** A six-page color brochure describes a wireless microphone system produced by Vega Electronics Corp. The folder also lists several accessories for the wireless mike, with specifications of the equipment and suggestions for its application.

*For a free copy of this folder, circle number 826 on the Reader Service Card.*

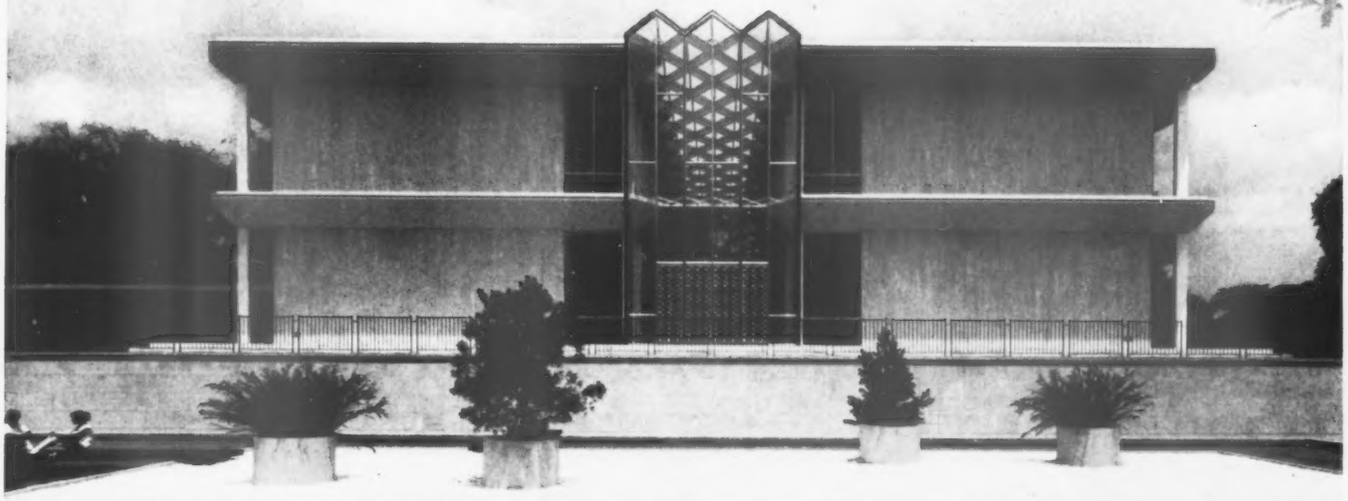
**Formica doors.** A folder published by Formica Corp. includes complete application features, construction details and specifications of formica doors. A variety of design possibilities and a list of sales and service outlets are also provided.

*For a free copy of the folder, circle number 829 on the Reader Service Card.*

**Mats and matting.** Utility and decorative mats and matting are described in a catalog by the George J. Arafe

*continued on page 184*

# SCHOOL OFFICIALS VOTE YES FOR...



# MARBLE IN SCHOOL BUILDINGS

### COMMENTS FROM SCHOOL OFFICIALS

"Completely sold on marble due to low maintenance, character, and durability."
School Principal in Kansas City, Missouri

"With marble, cleaning takes 25% to 50% less time—always presents a new and fresh appearance."
An Executive Director of residence halls in Bloomington, Ind.

"We wash all standing marble only twice a year."
A City Schools Building Engineer in Salt Lake City, Utah

"We wish more marble had been used, because it's so easy to maintain."
School Principal in Carthage, Missouri

Many school officials, faced with limited operating budgets, have reduced maintenance costs to a bare minimum by insisting that marble be used whenever possible in school construction and remodeling.

These officials know that marble costs no more to install than many other quality materials, yet it remains like new for years with a minimum of maintenance.

As a result, they specify marble for all school areas subject to hard use, such as corridor floors and walls, wash rooms, and shower rooms. They realize, too, that the beauty of marble creates an especially stimulating environment for students.

For full information about all the advantages of marble in school construction, write today for your free copy of the 22-page booklet, MODERN SCHOOL BUILDING, A STUDY IN TRUE VALUES.

**MARBLE INSTITUTE OF AMERICA, INC.**
**32 South Fifth Avenue, Mount Vernon, New York**

(Circle number 760 for more information)

SPECIFY

# V.O.S.

**MOST IMPORTANT—**

*V.O.S. Leather Look Gym Seating Stays First-Day New With Practically No Maintenance!*

No costly refinishing . . . no costly repairs . . . no costly replacements—V.O.S. Leather Look Seating is made to insure the absolute minimum in upkeep time and dollars. Vinyl seating can be *cleaned with ordinary detergents* . . . (and even this is rarely required in normal use) . . . unlike wood which requires extensive refinishing, V.O.S. *need never be refinished* . . .

*For More Information Write:* BRUNSWICK CORPORATION, SCHOOL EQUIPMENT DIVISION, KALAMAZOO, MICHIGAN

FOLDING GYM SEATING
WITH THE LEATHER LOOK

**Brunswick**

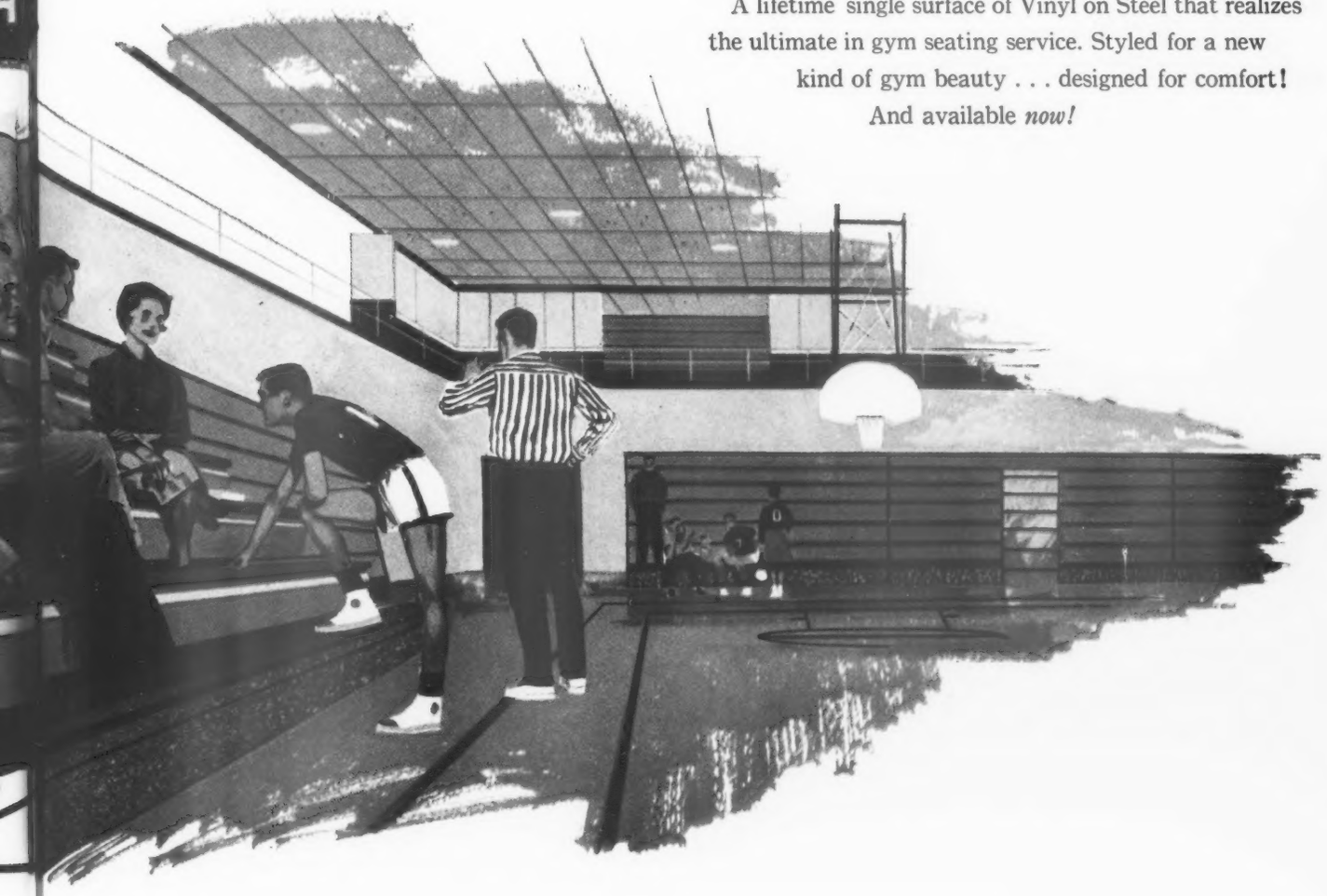
*Totally New Vinyl-On-Steel Gym Seating Design Guarantees*

*A Lifetime of Comfortable, Maintenance-Free Service!*

Imagine! Gym Seating with all the warmth, texture and color of leather *plus* the inherent strength and durability of steel! That's V.O.S. by Brunswick.

A lifetime single surface of Vinyl on Steel that realizes the ultimate in gym seating service. Styled for a new kind of gym beauty . . . designed for comfort!

And available *now!*



**V.O.S. IS STRONG . . . SAFE**

The perfect gym seating material . . . heavy gauge steel won't bend, buckle or sway under the heaviest loads. Permits use of steel-to-steel understructure connections which, unlike wood, never weaken and never loosen.

**V.O.S. CAN TAKE IT . . .**

Resists abrasion, scuffing, scratches like nothing ever did! Special vinyl formula "springs" back, retains its finish and Leather Look through the years. Never splints or chips—won't snag stockings, trousers, skirts.

**V.O.S. REDUCES NOISE . . .**

An important bonus! Leather Look vinyl coating helps absorb and deaden gymnasium noises while gym is being used for spectator games or for regular gym classes.

**V.O.S. IS TEMPERATURE-PROOF . . . STAIN-PROOF . . . BURN RESISTANT**

Heat, cold . . . wet air, dry air . . . V.O.S. is unaffected! Dirt, grease, most food stains come off easily, with ordinary detergents.

(Circle number 743 for more information)

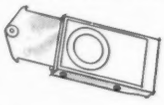
SCHOOL MASTER 750 shown with exclusive accessory Rewind Take-up and Semi-Automatic Slide Changer.

# Only a Graflex SCHOOL MASTER® Can Do So Many Jobs So Well!

The versatile SCHOOL MASTER

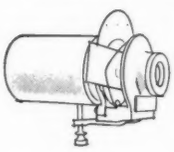
shows single frame filmstrips or 2 x 2 slides with equal efficiency. Can be changed from filmstrip to slides in seconds; no tools needed . . . no parts to remove. Puts more light on the screen . . . permits showings in semi-darkened rooms. No other filmstrip projector offers such a complete line of accessories for specific instruction requirements.

With a Speed-i-o-scope®, or the inexpensive Tach Adapter®, you can use your SCHOOL MASTER for tachistoscopic projection



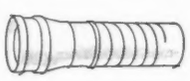
at varying speeds from 1/25 sec. to 1/100 sec. Ideal for Remedial Reading, Response Threshold Analysis and Visual Acuity Testing.

The Micro-Beam® Unit adapts the



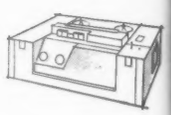
SCHOOL MASTER for microscope slide projection at amazingly low cost.

Six accessory lenses, with a wide range of focal



lengths adapt the SCHOOL MASTER to every projection distance and screen size.

The SCHOOL MASTER (with remote control) also works with the Graflex Classic PM Tape Recorder. Provides completely automatic presentations, synchronizing sound and filmstrip.



SCHOOL MASTERS are the most efficient and versatile portable filmstrip and slide projectors on the market. No wonder they are the most popular with today's educators. Four models to choose from: 500 watt and 750 watt, manual or remote control.

**For complete information on SCHOOL MASTER Projectors and accessories, see your Graflex Audiovisual Dealer or write Dept. SM-11, Graflex, Inc., Rochester 3, N. Y.**

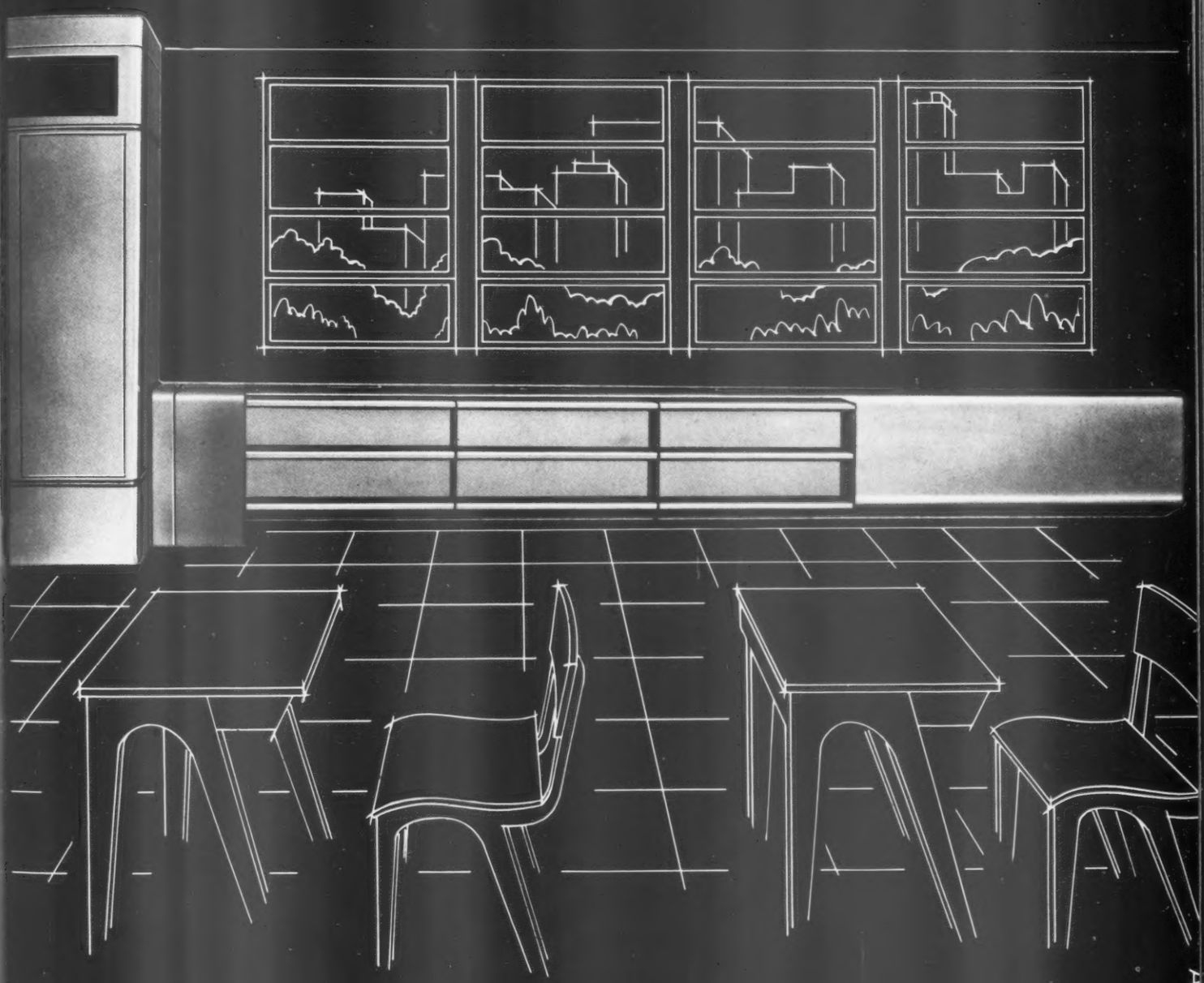
**GRAFLEX®**

A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION GPE

(Circle number 721 for more information)

# new JANITROL

school heating - ventilating - cooling system
with draft-free perimeter distribution



for
- new schools
- add-on school rooms
- modernization

JANITROL HEATING AND AIR CONDITIONING
A DIVISION OF MIDLAND-ROSS CORP., COLUMBUS 16, OHIO

A.I.A. FILE NO. 30-A

# NOW... *any schoolroom can have* modern comfort *at* modest cost!

The new Janitrol school comfort system is a self-contained, individual-room heating and ventilating system (with optional summer cooling) that features perimeter-type, draft-free air distribution, recognized as the best way to comfort condition a schoolroom. The system may be installed very economically (saving as much as 60% over large central systems), and extra savings will continue, due to the low operating and maintenance costs.

The standard system consists of (1) a floor-to-ceiling metal cabinet which encloses the gas-fired heating and ventilating unit and (2) wall duct sections that occup unused space and provide efficient, perimeter distributio of the conditioned air. If extra space-saving storage desired, matching shelves may be included with the wa ducts initially, or added at any future time.

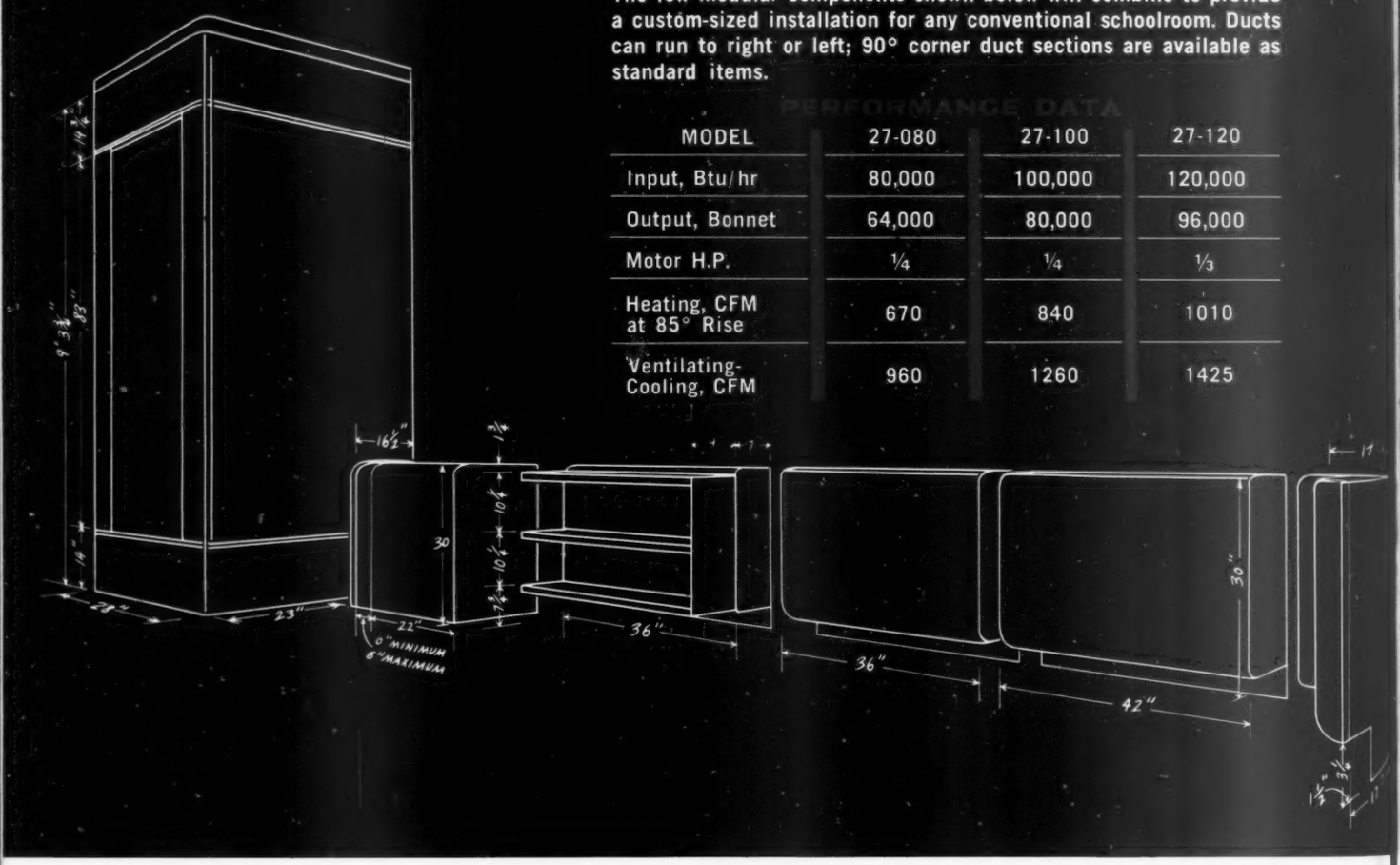
The modular sections of the system permit unusua flexibility in installation for new schools, additions existing structures or for modernization of older schoo rooms. Installation may be made after all constructio work is completed, if necessary.

## dimensions — capacities

**The few modular components shown below will combine to provide a custom-sized installation for any conventional schoolroom. Ducts can run to right or left; 90° corner duct sections are available as standard items.**

PERFORMANCE DATA

| MODEL | 27-080 | 27-100 | 27-120 |
|---|---|---|---|
| Input, Btu/hr | 80,000 | 100,000 | 120,000 |
| Output, Bonnet | 64,000 | 80,000 | 96,000 |
| Motor H.P. | ¼ | ¼ | ⅓ |
| Heating, CFM at 85° Rise | 670 | 840 | 1010 |
| Ventilating-Cooling, CFM | 960 | 1260 | 1425 |




## OPERATING FEATURES

HEATING. The gas-fired heating unit is A.G.A. approved as a forced-air furnace for closet installation and as a unit heater for all types of gasses, including LP, so even schools off the gas lines can use this system. For maximum fuel economy during non-school hours, heating may be automatically, or manually cut back, and outside ventilating air intake closed. **All combustion air is supplied from a separate outside air inlet — no combustion air is drawn from the classroom.**

VENTILATING. An unusually quiet-operating centrifugal blower, rubber cushioned in an acoustically-insulated compartment, circulates the conditioned and filtered air. **There is no mixing of air between rooms.** Outside fresh air, in quantities adjustable to meet local codes, is automatically brought into the classroom during school hours and blended to insure draft-free comfort. The system is thermostatically controlled to provide uniform room temperature at all times. Many classrooms need cooling, even in winter, due to unusual heat gain from the sun, lights and students. On these occasions, the system will automatically bring in 100% unheated out-door air, in increased volume, until room temperature moderates.

PERIMETER DISTRIBUTION. In the perimeter-type air distribution system, the wall ducts are placed along the walls below the windows, and distribute the conditioned air upward across the exposed wall, and window surfaces and throughout the room. Each wall section has adjustable diffusing outlet with locking damper control to accurately balance the air flow. To avoid floor drafts, all circulated air is returned to the unit at ceiling level.

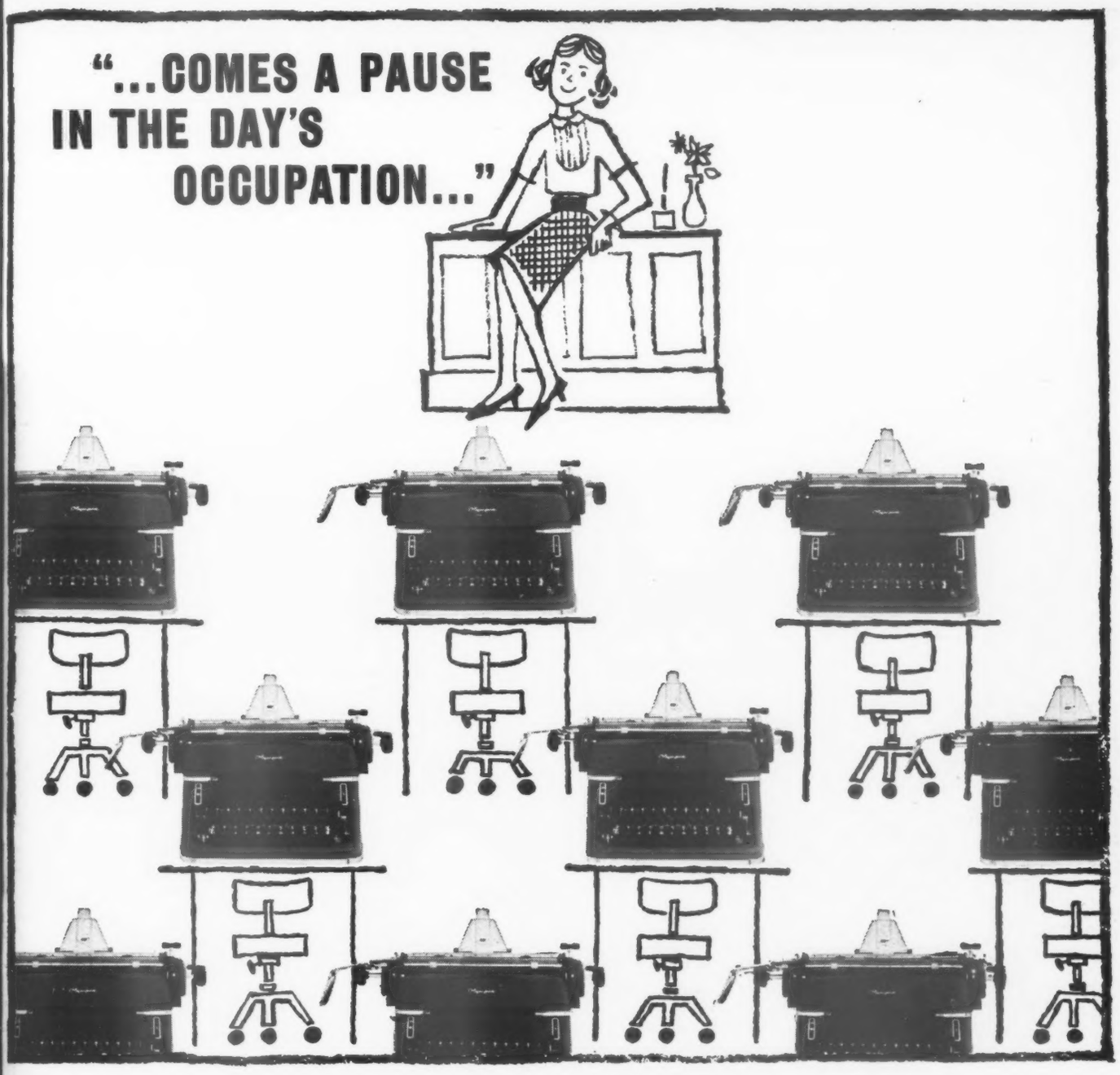
SUMMER AIR CONDITIONING. An inherent feature of the Janitrol system is the economical method of providing summer air conditioning for individual rooms that are used frequently during the warm season. The insulated unit base compartment is designed to receive the summer air conditioning coil without major system alterations. Standard Janitrol summer air conditioning equipment may be included as a part of the original installation, or may be added later at reasonable cost by a competent air conditioning contractor.

**FREE-NEW DESIGN FILE**

**Write for your file of complete technical and specification data on school heating and air conditioning.**

**JANITROL HEATING AND AIR CONDITIONING**
**A DIVISION OF MIDLAND-ROSS CORPORATION**
**DEPT. S-61 COLUMBUS 16, OHIO**

# "...COMES A PAUSE IN THE DAY'S OCCUPATION..."



# ...KNOWN AS THE TEACHERS' HOUR!

A time to relax—a time to reflect! Are the fledglings progressing? How's their technique...speed—stance—stroke?

It's satisfying to be a perfectionist...and to help develop this in other minds and hands. Credit, too for the precision-built Olympia Typewriters...serving as partners in perfection.

These superb typewriters come fully-equipped with the finest, most advanced typing aids...from exclusive spring-cushioned keytops to convenient half-spacing. Features that are easier to teach with...to learn on!

Important, too, is Olympia's reputation for easy, quiet, trouble-free performance, year after year...cutting maintenance costs to an absolute minimum.

No wonder more and more schools, from coast to coast, are selecting Olympia. Why not put one to the test yourself—before you decide on any other typewriter!

**SPECIAL OFFER**

A FREE COPY OF ALAN C. LLOYD'S "The Typing Teacher As A Technician"

...an informative series of articles on the development, protection, correction and refinement of basic typing skill.

OLYMPIA DIVISION SMB
Inter-Continental Trading Corp.
90 West Street, New York 6, New York

Gentlemen:

Please send me a copy of Alan C. Lloyd's articles..."The Typing Teacher As A Technician"... to the address below.

Name_____

Address_____

City_____ Zone____ State_____

Olympia

*"Writes best of all—because it's built best of all!"*

(Circle number 730 for more information)

## PROPERTY PROBLEMS—3

**IF your school system must buy additional school sites . . .** how will you determine what to pay for the property?

This is one of the most difficult questions that school administrators and board members face. Criticism of the price often develops, no matter how carefully the transaction is handled. Hindsight and a one-sided presentation may make it appear that an error was made. Comments made in good faith at the time of the purchase can be twisted by being taken out of context.

Often board members and administrators would like a check on their own judgment of price by someone entirely independent of the transaction. Also, they need expert testimony if they must condemn the property and the proceedings go into court.

Many school systems have found that the best answer to this problem is an independent valuation of the proposed site. A professional appraiser will investigate all the circumstances surrounding the property and present an unbiased opinion of value. Critics of the transaction then find it hard to attack the board. Questions of personal interest have been eliminated. A detailed report shows how the value was calculated. And, a property expert is ready to defend his opinion and to testify if condemnation is necessary.

A nation-wide organization, Marshall and Stevens offers a School Valuation Department which has appraised property for schools and colleges throughout the United States and Canada.

An informative brochure, The Purposes of Appraisals, is yours for the asking. Simply write Marshall and Stevens, Department 43, 6 Church Street, New York 6, New York. Other offices in Chicago, Cincinnati, Dallas, Denver, Detroit, Houston, Los Angeles, Miami, Minneapolis, Montreal, Philadelphia, Phoenix, St. Louis, San Francisco and Vancouver, B.C.

(Circle number 726 for more information)

# WHERE TO GET HELP

*A guide to useful information*

### STATISTICS

**Classroom teacher salaries.** A survey by the NEA shows an upward trend in classroom teaching salaries in urban districts of more than 100,000 population. *(For CEI figures on the whole nation, see pages 96 to 105 of this issue.)*

According to the report, although beginning teachers are paid lower salaries than beginners in most other professions, the greatest discrepancy between teaching and other professions is still in the amount of progress possible.

The report shows that in areas with a population of over 500,000, salaries range from an average beginner's minimum of $4,373 for teachers with a B.A. degree to an average maximum for those with Ph.D.'s of $7,575.

SALARY STATISTICS, URBAN DISTRICTS 100,000 AND OVER IN POPULATION. *National Education Association, 1201 16th St., N.W., Washington 6, D.C. 32 pages. Single copy 50 cents; quantities at discount.*

### HIGHER EDUCATION

**Engineering student statistics.** This survey of engineering enrollments and conferred degrees covers 233 institutions of higher education which grant engineering degrees. Undergraduates preparing for engineering careers who are enrolled in liberal arts and junior colleges have not been included. The annual survey reports that for the second consecutive year, there has been a decline in undergraduate engineering study. The causes and implications of this decline are not discussed; however, considerable insight can be gained by a study of the data presented. The report covers all levels of engineering training.

ENGINEERING ENROLLMENTS AND DEGREES, *1959. Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 48 pages. 40 cents.*

### AUDIO-VISUAL

**A digest of materials.** Your audio-visual teachers will find this handy pamphlet useful when preparing instructional materials. Sections are devoted to effective use of filmstrips, utilization of 16mm sound film, recorded instruction, language laboratories, preparation and use of transparencies, use of the opaque projector, educational television and other subjects.

The booklet may be helpful as a reference. Most articles were originally written for educational publications.

AUDIO-VISUAL DIGEST. *Graflex, Inc., Department 125, 3750 Monroe Ave., Rochester 3, N.Y. 48 pages. 25 cents.*

### CERTIFICATION

**Guidance workers.** This bulletin by the Office of Education provides certification information through the calendar year 1959. It is divided into two sections.

Part I lists guidance worker certification requirements by states and territories, 37 of which have mandatory requirements, four optional requirements and 13 no requirements. Part II lists certification requirements for school psychologists. Only 15 states have mandatory requirements for these counseling psychologists.

Requirements for certification are listed in detail, including pertinent information with regard to experience and education for all counseling positions.

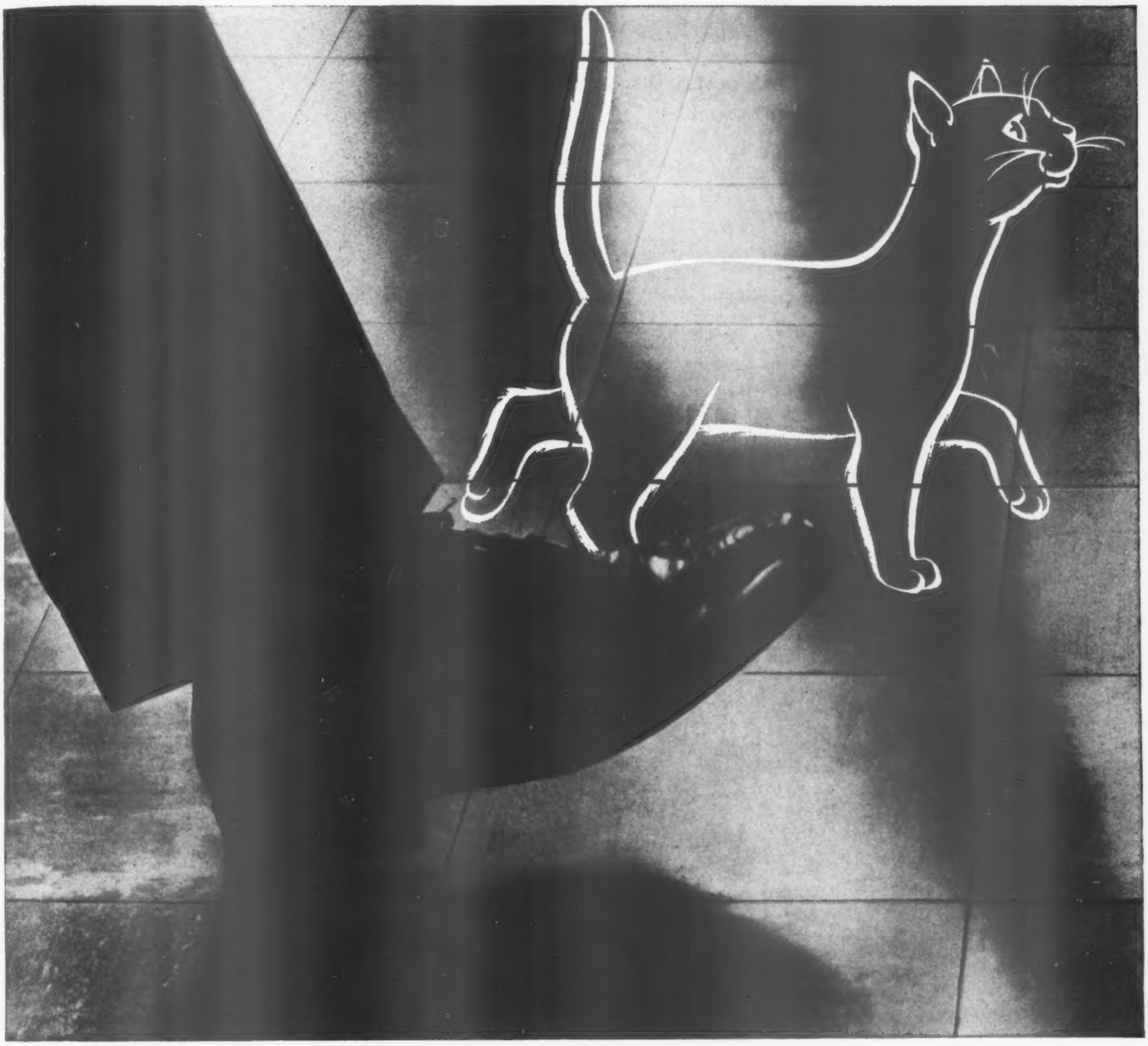
GUIDANCE WORKERS CERTIFICATION REQUIREMENTS. *Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 98 pages. 35 cents.*

### MAINTENANCE

**Organizing your program.** Your custodial or maintenance supervisor will find valuable assistance in this booklet which contains ideas and developments in the maintenance management field. Published by the Office of Education, it covers all aspects of maintenance at both the school and administrative levels.

Particular attention is given to developing an effective maintenance organization, personnel, and financing and cost control. A section on personnel, for example, presents details on ratio of supervisors to maintenance employees, desirable skills and personal characteristics of employees, per-

*continued on page 42*



# Sure Footing on Mirror-Smooth Floors

## When You Use Wax Containing LUDOX®, Du Pont's Anti-Slip Ingredient

No longer must beautiful, waxed floors be safety hazards too! With "Ludox" colloidal silica in your wax, you get the same hard, glossy, easy-to-clean finish—but traction is improved. You feel sure-footed as a cat.

The tiny colloidal silica particles in "Ludox" provide a unique snubbing action, even though you can't see or feel them. Walking is safer, more carefree and secure. You get around easier, and this lightens the burden of a busy day.

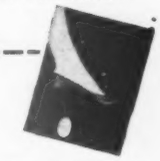
Floor wax with "Ludox" gives you the mirror shine you want plus solid, sure-footed safety. Mail the coupon for more information and a list of suppliers who carry waxes containing "Ludox".

**DU PONT LUDOX®** colloidal silica

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING... *THROUGH CHEMISTRY*

**MAIL THIS COUPON TODAY**



E. I. du Pont de Nemours & Co. (Inc.)
Industrial & Biochemicals Dept.
Room 2539SM, Nemours Bldg.,
Wilmington 98, Del.

Please send FREE booklet on the advantages of floor wax containing "Ludox" and a list of suppliers.

Name_____

Company_____

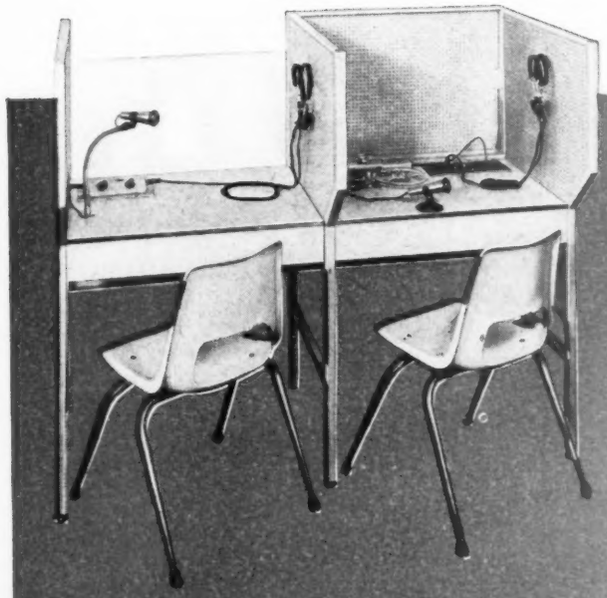
Address_____

City_____ State_____

(Circle number 748 for more information)

PLANNING A TEACHING LABORATORY?

*Talk to* WEBSTER ELECTRIC



**STUDENT CONTROL**—optional booths show listen-respond and listen-respond-record systems. Booths are available with accoustical front panel, glass front panel or convertible desk top.

THE INVESTMENT you may soon be making in classroom electronics is a crucial one — upon your decision rests the success of your new tape teaching program. That's why it's so important to consider the advantages of Webster Electric's wide experience in this exciting development — as a leading manufacturer of electronic and communications equipment, as a pioneer for 13 years in laboratory teaching.

Versatility is a sound reason for selecting a Webster Tape Teaching Laboratory. Designed to meet the present needs of *all* your educational departments, it can be readily expanded for future needs, or adapted to match new developments in this fast growing field. Obsolescence will not be a problem!

And with Webster your choice is not limited. You can choose a complete listen-respond-record system or a simple listen-respond setup. You can permit the student to select his own program or the instructor may select for the student. Simple operation speeds learning. High fidelity sound aids comprehension. And, each unit is component-planned for ease of installation, economical layout. Panel mountings fit standard EIA racks.

Webster Electric's experience can help you teach better *electronically!* Contact your local Webster Electric distributor or write direct for performance data and cost figures.

ELECTRONICS DIVISION

WEBSTER ELECTRIC

RACINE · WIS

Franklin adv. 9177

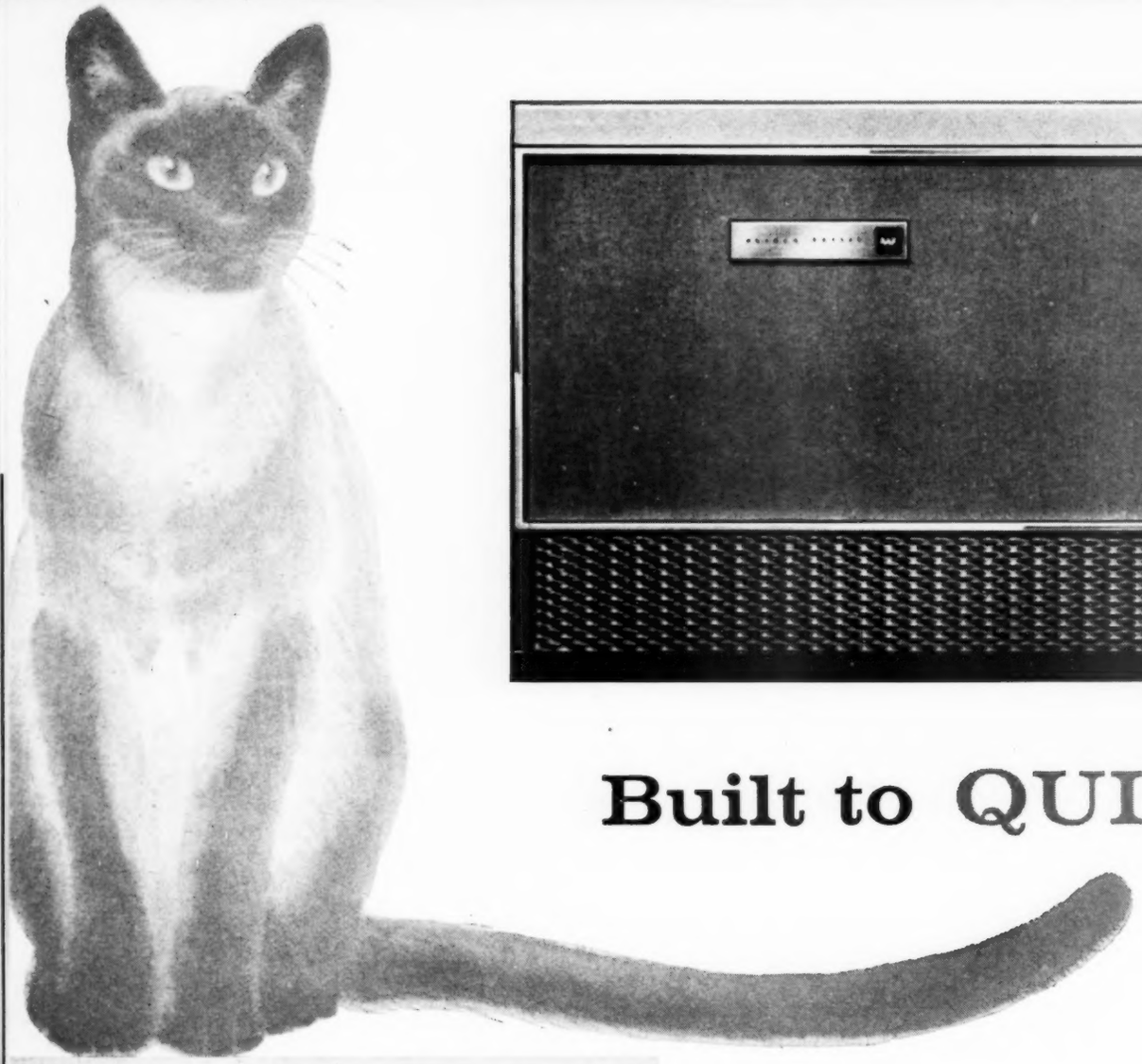
## *Specialists in communications!*
## *Pioneers in electronic teaching!*

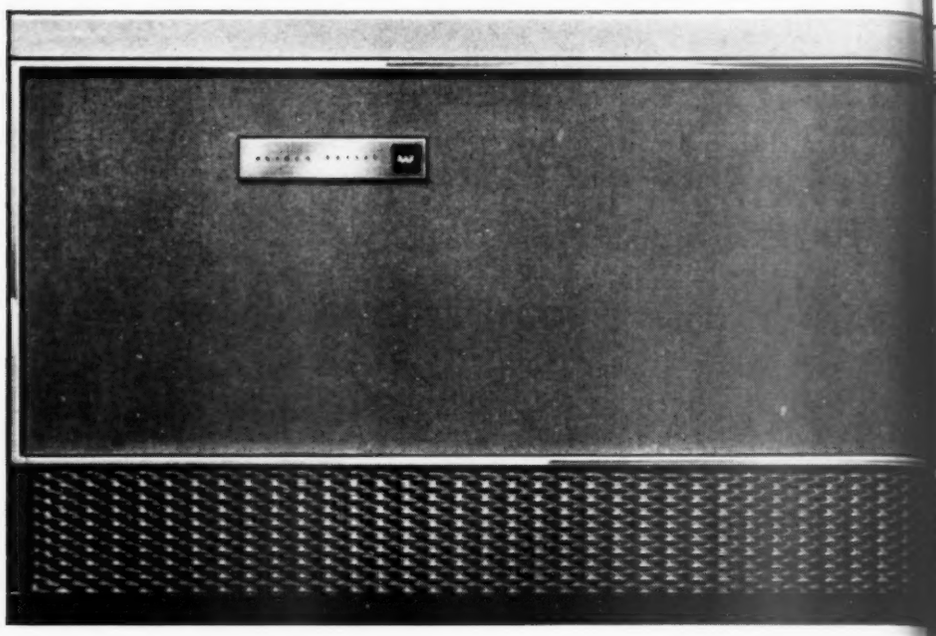
**PROGRAM SOURCE** — Ekotape® Recorder-Reproducers with simple and precise control, instant start-stop action.

**MONITOR CENTER** — direct contact between instructor and 6 to 36 students; add-on units increase capacity to 54 or more.

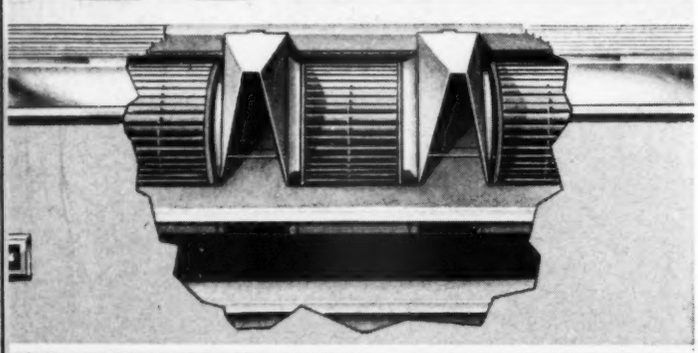
**PROGRAM CENTER** — permits instructor to direct any of nine different programs (tape, radio, phono, audio portions of telecasts) to any of 36 or more students.

(Circle number 696 for more information)



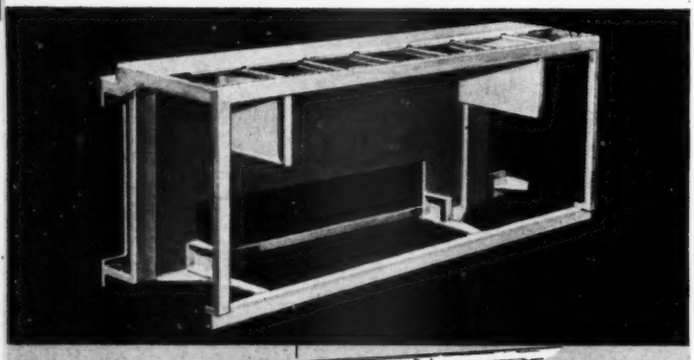


# Built to QUIETLY



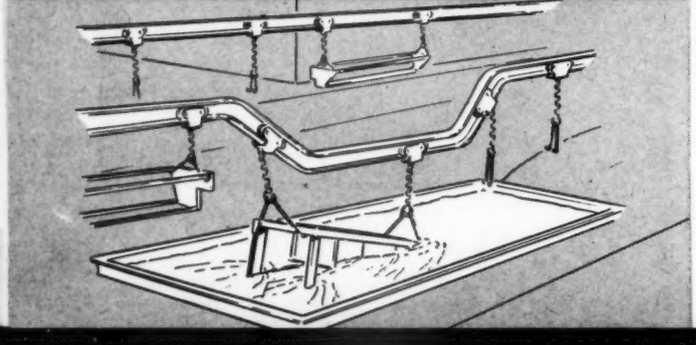
**QUIETER...50% QUIETER THAN OTHER UNIT VENTILATORS**

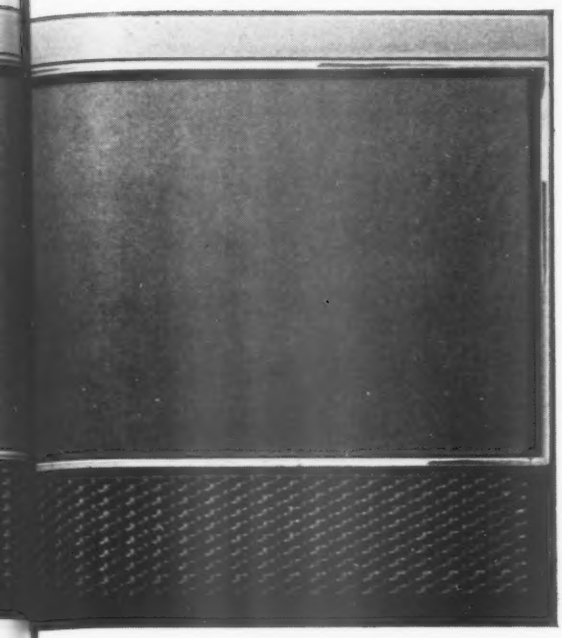
*A unique new fan housing design hushes sound level. Herman Nelson unit ventilators are 50% quieter than other makes. Extruded top discharge grille design and "modular" fan construction are combined with a new first in fan housing design to keep the sound level extremely low.*



**LIFE-OF-THE-BUILDING CONSTRUCTION**

*New single-unit, all-welded frame construction is an important feature of every Herman Nelson Unit Ventilator. Structural maintenance is eliminated. The entire frame, after fabrication, is dipped into a permanent corrosion- and rust-resistant solution. Outdoor and room air damper frames are also dipped for maximum protection against rusting.*





**ADVANCED ARCHITECTURAL STYLING**

*New Herman Nelson Unit Ventilator styling was inspired by the distinctive patterns of modern school architecture. This new styling was acclaimed by Product Engineering magazine as an "outstanding achievement in product engineering and design". Decorator panels are available in six beautiful colors. Basic unit color is charcoal with aluminum trim. Gracefully "lanced" intake grilles and extruded aluminum top discharge grilles help the unit efficiently "breathe" fresh-air atmosphere into the school classrooms.*

# Youtlive the school you put it in!

EVERY Herman Nelson Unit Ventilator is expertly designed from the inside out to provide accurate room-by-room thermal control *for the life of your new school building.*

Here are four of the many special Herman Nelson features which assure long, reliable unit ventilator service:

1 Single-unit welded frame construction

2 Corrosion-resistant "bath" for unit and damper frames

3 Special low-sound-level fan housing design

4 One-piece filter system

Consistent product improvements have led architects and school officials to expect the best *first* from Herman Nelson for over 50 years. Herman Nelson developed the *first* commercially successful unit ventilator, the *first* hot water heating element for unit ventilators, the *first* downdraft control system, and most recently, the *first* air conditioning unit ventilator.

Write for a free copy of the new full-color Herman Nelson Equipment Guide for Schools. Herman Nelson School Air Systems Division, American Air Filter Company, Inc., 25 Central Avenue, Louisville, Kentucky.

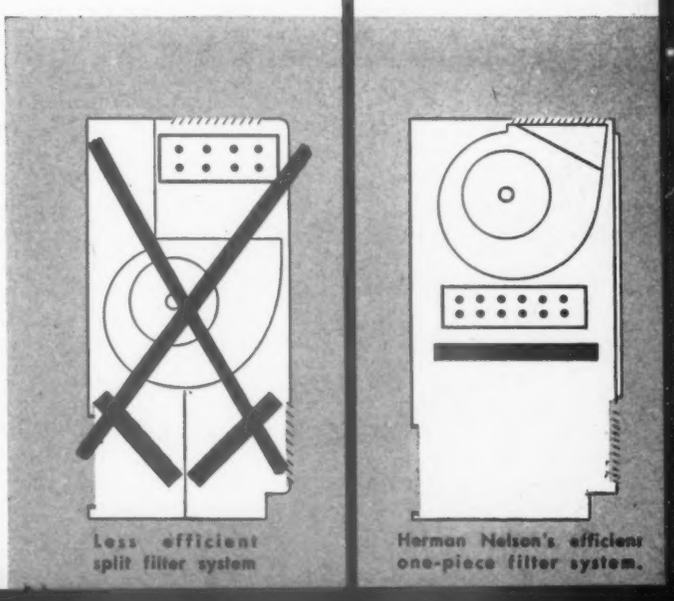
**Herman Nelson** AAF

**SCHOOL AIR SYSTEMS DIVISION**

American Air Filter Company, Inc., Louisville, Kentucky

**EFFICIENT ONE-PIECE FILTER SYSTEM**

*Herman Nelson's one-piece filter system permits the mixture of outdoor and room air to pass through the entire filter area at all times. This is important. Split filter systems "hide" the second filter which is often overlooked when time comes to change the filters. This damages filter efficiency by reducing full outdoor air delivery and restrieting cooling capacity. Filters on Herman Nelson Unit Ventilators are easily accessible through lower front panel (see photo).*



Less efficient split filter system

Herman Nelson's efficient one-piece filter system.

formance standards, training, and policy.

SCHOOL PLANT MANAGEMENT: ORGANIZING THE MAINTENANCE PROGRAM. *Superintendent of Documents, U. S. Government Printing Office, Washington 25, D.C. 98 pages. 50 cents.*

## VOCATIONAL EDUCATION

**Planning a curriculum?** Three small pamphlets, published by American Vocational Association, point to a continuing need for occupational training and counseling in public education.

"Occupational Distribution as a Factor in Educational Planning," breaking down the labor force into job categories, says if schools are to prepare youth for socially useful employment, programs must be planned for different levels of ability and for the numbers and types of workers needed.

"What Is Distributive Education," directed at school board members, answers questions on how distributive education can be made more effective both in and out of schools. It should be administered locally, according to the booklet, through high schools, community colleges, technical institutes and vocational schools.

"New Developments and Their Impacts," explaining the shift from an agrarian to an industrial economy, shows why it is necessary to improve and expand vocational education programs to cope with international competition.

FACTS YOU SHOULD KNOW. *Series of three bulletins. American Vocational Association, 1010 Vermont Ave., N.W., Washington 5, D.C. Free.*

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**Accident prevention in shops.** Here's a guide to help you implement safety education programs in your school shops. Published by the Department of Health, Education and Welfare, it presents the recommendations of last year's conference on shop safety programs and explains how to use student accident reports.

IMPROVING SAFETY EDUCATION PROGRAMS IN SCHOOL SHOPS. *Superintendent of Documents, U. S. Government Printing Office, Washington 25, D.C. 48 pages. 35 cents.*

## CURRICULUM

**Bibliography by states.** This is the Office of Education's bibliography by states of curriculum publications in science, mathematics and modern foreign languages. The book offers descriptions of studies and research projects sponsored by states in these fields.

STATE CURRICULUM GUIDES IN SCIENCE, MATHEMATICS AND MODERN FOREIGN LANGUAGES. *Superintendent of Documents, U. S. Government Printing Office, Washington 25, D.C. 28 pages. 25 cents.*

## TEACHER TRAINING

**Vocational instructor preparation.** This booklet, a handy guide to persons developing training programs for teachers, is based on a study of qualifications and preparation of vocational education instructors.

The focus of this study is on the identification and evaluation of the knowledge, skills and abilities necessary for trade teaching. The report presents criteria so that you can evaluate programs for the preparation of your vocational education instructors.

An effective program, says the report, should include a good deal of general and specialized education, with preparation for teaching, in addition to professional experience.

Your teacher training program, according to the report, should emphasize the importance of a teacher's abil-

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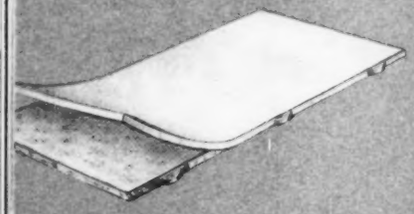

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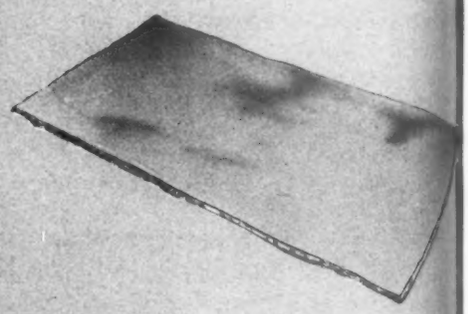

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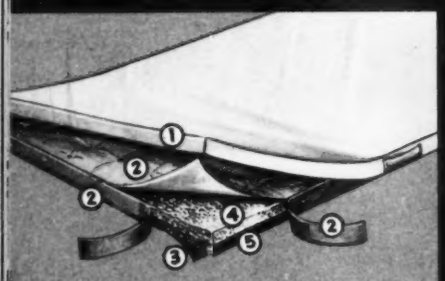


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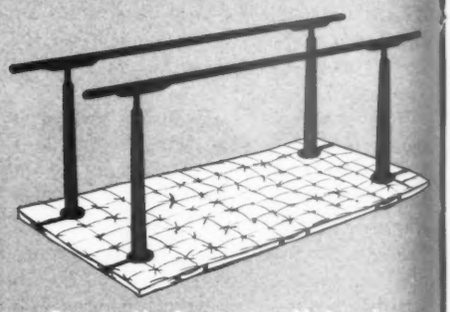

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ity to develop student attitudes toward safety-consciousness in job performance and an appreciation of good workmanship.

TEACHER COMPETENCIES IN TRADE AND INDUSTRIAL EDUCATION. *Superintendent of Documents, U. S. Government Printing Office, Washington 25, D.C. 64 pages. 30 cents.*

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**Report of training institutes.** This booklet is a report of the first short-term counseling and guidance institutes authorized by NDEA. The training sessions, attended by 2,210 counselors and guidance personnel, were held during the summer of 1959.

The booklet brings together information relating to the program and describes its objectives. The results of the first summer's sessions are evaluated by the author, Dr. Leona E. Tyler, Professor of Psychology at the University of Oregon.

In analyzing the first institutes, Dr. Tyler makes several recommendations. Among them is a call for more flexibility in the programs.

THE NATIONAL DEFENSE COUNSELING AND GUIDANCE TRAINING INSTITUTES PROGRAM: A REPORT OF THE FIRST 50 INSTITUTES. *Superintendent of Documents, U. S. Government Printing Office, Washington 25, D.C. 94 pages. 35 cents.*

## ELEMENTARY EDUCATION

**Language teaching techniques.** The art of teaching foreign languages to elementary children is discussed at length in this book published under Title III, NDEA.

The material is presented to assist the teacher where an elementary language program is already established. Sample materials illustrate several teaching techniques for Spanish and French. Chapters include pronunciation, dialogues, narratives and descriptions, visual materials, games and songs.

MODERN FOREIGN LANGUAGES IN THE ELEMENTARY SCHOOL: TEACHING TECHNIQUES. *Superintendent of Documents, U. S. Government Printing Office, Washington 25, D.C. 66 pages. 45 cents.*

## GUIDANCE

**The gifted student.** This booklet by the Office of Education describes four research projects dealing with gifted students, including those who are highly intelligent but not creative, and those who are highly creative but not so intelligent.

The four research titles are: The Study of Giftedness: A Multidimensional Approach; Identification and Classroom Behavior of Gifted Elementary School Children; Motivation Patterns of Superior High School Students; Opportunities for Research on the Education of Gifted Students.

COOPERATIVE RESEARCH: *The Gifted Student. Superintendent of Documents, U. S. Government Printing Office, Washington 25, D.C. 83 pages. 35 cents.*

---

**Reading study guide.** Your guidance people will find this book helpful when working with remedial reading students. The guide is designed to help the pupil who must pass a reading comprehension examination for admission to college or as a condition of employment. Material covers reading comprehension and interpretation in social studies, natural sciences, and English grammar and usage. Past examinations are presented, as well as charts and tables, and sample questions and answers.

HOW TO PASS HIGH ON READING TESTS. *Arco Publishing Co., 480 Lexington Ave., New York City, 17. $3.*

---

**Home economics filmstrip.** Here's a filmstrip which can help to explain home economics education to students and parents. It has been designed for viewing by school administrators, vocational counselors, and curriculum specialists as well as teachers.

The filmstrip presents a typical school board meeting at which there is a discussion of why home economics is essential. Professional home economics careers are also explored.

The film is part of a kit which includes a 33⅓ rpm recording and a written narration guide.

HOME ECONOMICS FILMSTRIP KIT. *The Pillsbury Co., Minneapolis 2. $2.90.*

## EDUCATIONAL AIDS

**A guide to materials.** Your audio-visual director and teachers will find this guide a useful tool in acquiring supplementary educational materials. The book is a comprehensive listing of current aids for all grade levels. More than 1,500 items are categorized under 59 headings such as mental health, language arts, social studies, mathematics, etc.

Each entry is accompanied by a brief description, an indication of grade level, and a source. Nearly all of the materials—which include


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**Only diffuse light could leave so few shadows under the desks in this schoolroom, for instance.*

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**SCENES FROM NEW "DEFENSIVE DRIVING" FILM SHOW**

# How the Ætna Drivotrainer system puts students in the driver's seat

**On your mark, get ready, stop!** That's what this scene from "Defensive Driving" should flash to the mind of each student as he follows the film from his Ætna Drivotrainer classroom car.

**Here's how** this scene was made—with camera mounted on rear platform of special filming car. Oncoming car turns left in front of student, then stops for pedestrian. Student learns to anticipate the situation and prepare to meet it properly.

Educators often ask us how we get such true "behind-the-wheel" feeling in every film we make for the Ætna Drivotrainer system. Mechanically speaking, the answer is easy. We simply mount our cameras in a specially modified car—*on the front seat* for "first person" shots (as seen through the driver's eyes), or *on a rear platform* for "third person" shots (as seen from the back seat).

But that's only part of the answer. More important are the weeks and months of thought and planning which precede—and follow—the filming of every sequence. For example, the newest film, "Defensive Driving," started with a discussion in April, 1960, at a meeting of the prominent safety and driving educators who comprise the Ætna Drivotrainer Curriculum Advisory Committee. Developing the script to its final form took many long hours of writing and countless conferences. Actual filming began in mid-July and was not completed until almost Labor Day. Then came editing and necessary animation—plus preparation of all the important teaching guides to accompany the film. In February or March—*almost a year after thinking started on "Defensive Driving"*—the film will be ready for distribution.

It is this combination of care, effort and skill which really put the true-to-life quality in Ætna Drivotrainer films. By simulating actual driving conditions right in the classroom, they form the very heart of the Drivotrainer system's uniquely effective and economical method of teaching correct driving attitudes and skills to thousands of tomorrow's drivers.

**Pulling into a parking lot,** student is confronted by passenger in adjacent car who suddenly opens door. Here the camera, mounted on the front seat, will give "driver's eye view."

**Student driver learns** to signal "slow down" to drivers behind him who would be unable to see car backing into street because of parked truck.

**Student's view** of car pulling out from roadside business establishment into fast-moving traffic. The student is forced to slow-down to maintain safe distance. Such situations would be difficult to create, without danger, in dual-control car instruction alone.

**Production team on location**—chief photographer, program supervisor, technical advisor from New York Board of Education, and production co-ordinator—discuss action of a scene.

**Ætna Drivotrainer Curriculum Advisory Committee,** composed of prominent safety and driver educators, help guide Drivotrainer system. They suggested need for "Defensive Driving," which is the 29th film produced since 1954. New films are constantly developed and revised to broaden effectiveness of program.


Development of the Drivotrainer system was financed by the Ætna Casualty and Surety Company as a contribution to education and highway safety. Ætna Casualty has no financial interest in the sale of Drivotrainer equipment but continues its public service support of the program through production of Drivotrainer films and other teaching aids, assisting in teacher training and by supplying an educational liaison service to Drivotrainer users.

Drivotrainer equipment is manufactured, sold and serviced by the Drivotrainer Division, Rockwell Manufacturing Company, Pittsburgh 8, Pa.

*For information on the Ætna Drivotrainer system, write:*

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books, films, folders, charts and slides —are free.

FREE AND INEXPENSIVE EDUCATIONAL AIDS, *by Thomas J. Pepe. Dover Publications, Inc., 180 Varick St., New York City, 14. 210 pages. $1.35.*

## ADMINISTRATION

**Rebuttal of group teaching.** The self-contained classroom, which is coming under attack by proponents of the team-teaching system, is defended in this pamphlet published by the Association for Supervision and Curriculum Development, a department of the National Education Association.

The booklet is a composite of arguments by educators in Michigan. One argument, for example, is that the teacher who has the opportunity to live with one group of students for several hours of the day is in a key position to get to know each student well. Thus the student may be encouraged "to move toward optimum realization of self." The self-contained class, according to the booklet, lends itself especially well to the implementation of the guidance function.

Another advantage of the self-contained class is that the teacher is likely to be more relaxed because time pressures are not as demanding as they may be in a class period, and the slowly maturing student is more likely to progress if pressures which hinder learning are removed.

This system, continues the argument, "does not in itself result in positive gains. . . . but it does facilitate and foster a learning climate."

Separate chapters are devoted to curriculum planning, how the teacher can make the most effective use of the self-contained classroom, and other subjects.

THE SELF-CONTAINED CLASSROOM. *Association for Supervision and Curriculum Development, 1201 16th St. N.W., Washington 6, D.C. 88 pages. $1.25.*

## DRIVER EDUCATION

**Animated color film.** "Stop Driving Us Crazy" is the title of an animated driver education film which departs from the usual slogans and warnings of death on the highway. Produced by Association Films, Inc., the 10-minute color presentation appeals to both teenagers and adults on ethical and moral grounds.

The film has the endorsement of the President's Committee for Traffic Safety.

STOP DRIVING US CRAZY. *Association Films, Inc., 347 Madison Ave., New York City 17. $6 per rental, $125 purchase.*

## LIBRARY

**Promotion kit.** A kit designed for teachers and librarians is being made available to promote the use of the school library in conjunction with National Library Week (April 16-22, 1961). Posters, streamers, bookmarks and a guide to youth activities are among the items included. One of the features is a list of program suggestions for Parent-Teacher Associations.

SCHOOL LIBRARY KIT. *National Library Week, P.O. Box 365, Midtown Branch, New York City 18. $1.*

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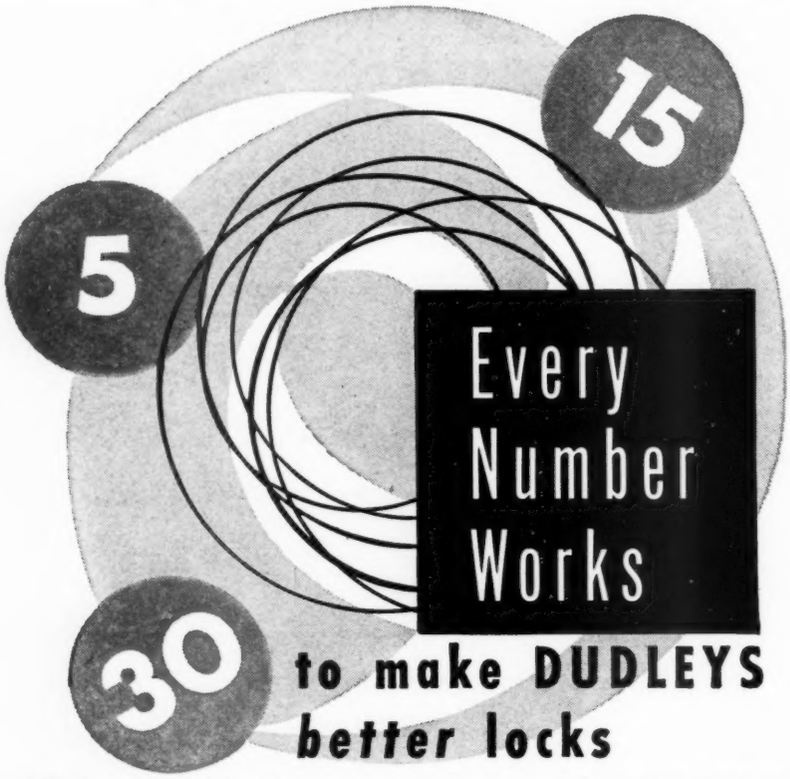
**Supplementary reading titles.** An annotated list of books for supplementary reading for grades K-12 includes a section of books for remedial reading. The catalog is published by the Children's Reading Service.

Many books, although primarily stories of adventure and romance, are directly related to social studies areas.

CRS BOOK CATALOG (1961 EDITION). *Children's Reading Service, 1078 St. John's Place, Brooklyn 3, N.Y. 64 pages. 25 cents. (Free to superintendents, principals and librarians.)*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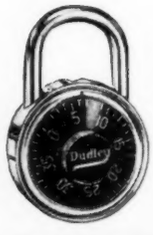

**RD-2**
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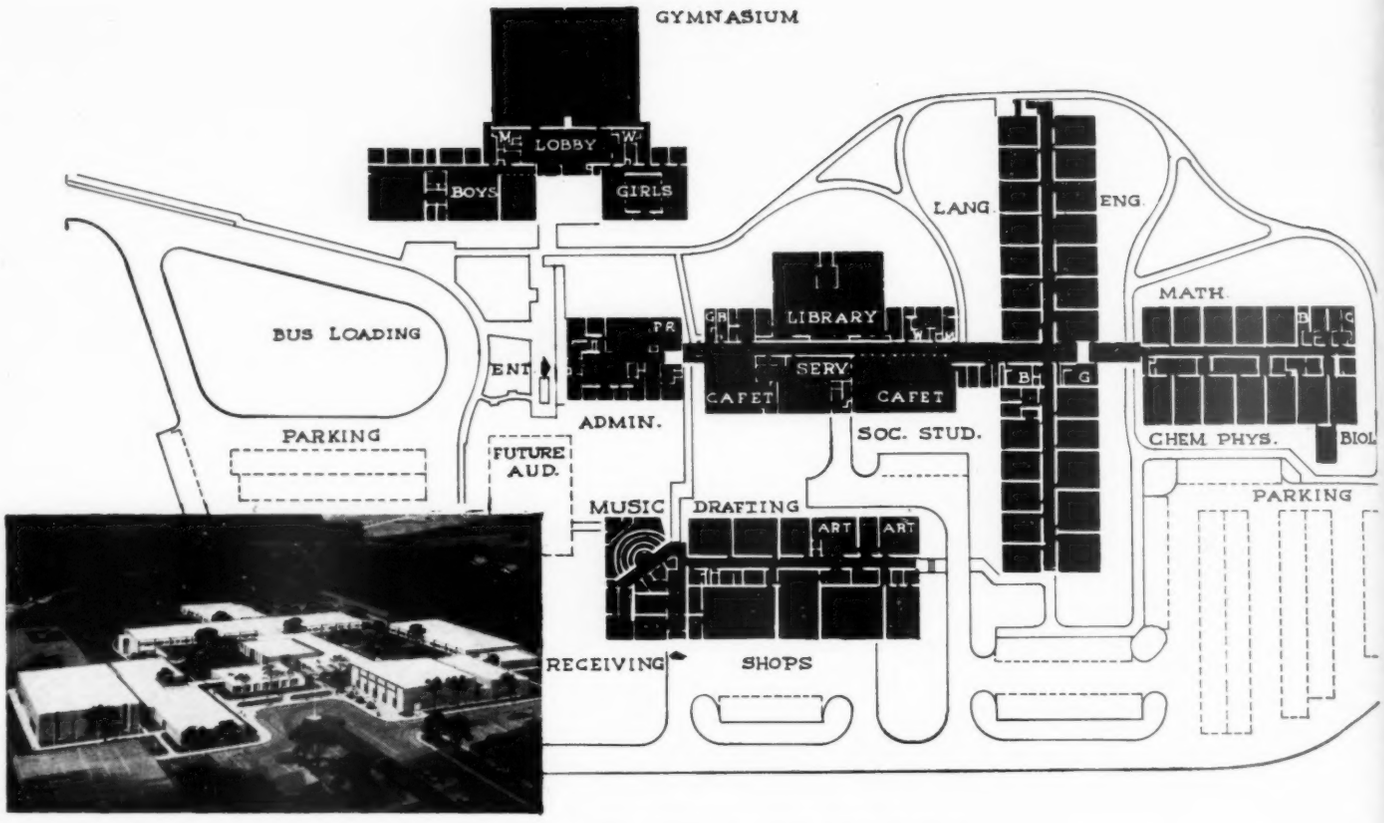
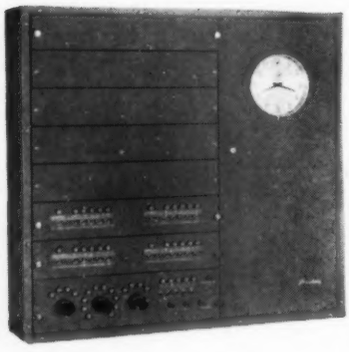



PLANNING THE NEW SCHOOL

This unusual new high school in Darien, Conn. has a present enrollment of 810 pupils, yet can easily be expanded to accommodate the 1200 to 1300 student population expected within five years. Architects Ketchum & Sharp, consulting engineers Cosentini Associates, and a hard working school building committee planned wisely for both present and future while keeping square foot costs below those of Darien schools built in 1948 and 1951.

*General Contractor – Deering Construction Company*

*Electrical Contractor – Wilton Electric, Inc.*



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# NEWS OF THE SCHOOLS

*A digest of current happenings in public education*

## 'Tower to auto— get back in your lane!'

That's what you can hear any day, booming from the radio-equipped control tower set in the middle of a new driving track, at Walter Johnson High School, Bethesda, Md.

Two driver education teachers in the tower supervise student drivers on the track below as they go through their training paces. The instructors keep in touch with each student via car radio and electric megaphone. Qualified student assistants accompany the trainees in their autos.

The track and tower cost the school $11,000. But, the teachers claim, they will now be able to handle two-and-a-half times as many students as they could in the past. They expect to give 510 students six weeks of behind-the-wheel instruction this year. This is in addition to the equally important six-week session they get in the classroom. Here, students learn the state's driving laws, see safety films and are reminded that road safety entails much more than turning a wheel.

## Last year set record for voter approval of school bonds

Talk about growing public resistance to school bond proposals is simply untrue in light of the steady upward trend of bond sales during 1960. In the first nine months of the year, $1,726 million in elementary and secondary school bonds were sold, an increase of 19.2% over the first nine months of 1959.

An even greater increase was recorded for voter approval of elementary and secondary school bonds during the first 10 months of the year. From Jan. through Oct., 1960, voters approved $1,235 million in bonds, compared to $967 million for the same period in 1959, an increase of 27.7%.

This rising trend is expected to continue through 1961, according to a recent study by the Investment Bankers Assn. of America. In fact, it's part of the upward moving pattern of voter acceptance during the past few years. In 1960, through the month of Oct., voters passed 81.1% by value of the bonds submitted for their approval. This represents an increase of 2.3% over the approval ratio recorded during the same months of 1959.

## Men stay in teaching —if the price is right

If you want to retain male teachers in your schools, pay them enough and keep the raises coming.

According to a study by New York City's board of higher education, the amount of his salary is what determines whether or not a man plans to continue teaching "indefinitely."

Eighty-four percent of men earning more than $5,200 a year planned to continue teaching, the study found. Of those earning less than $5,200, only 70% said they planned to remain in the schools.

The figures were drawn from a survey of more than 1,000 teacher-education graduates of New York's four municipal colleges, all of whom completed their training in 1954. Seventy-eight percent of the men queried were still teaching five years later, though most of them had taken on additional jobs to supplement their incomes.

## Federal aid plan advanced by Goldwater

Despite long-standing opposition to federal aid to education, Barry Goldwater, U.S. Senator from Arizona, *would* make use of a kind of federal assistance to reduce the tax burden on the citizens who pay for our schools.

Sen. Goldwater outlined his plan in

# Too good to miss . . .

**Small chest . . .** A high school student in New Jersey has a unique problem. He attends Pequannock High School, but his chest isn't broad enough to wear the school sweater. The solution, however, is easy. The boy is planning a transfer—to nearby Lodi High School.

**Ceiling drill . . .** We've heard of fire drills, air raid drills, survival drills and spelling drills, but from Formentin, France, comes a new one. Lacking funds to repair the plaster on the elementary school ceiling, officials have instituted "falling ceiling drills" during which the 60 students vanish under their desks.

**Some test . . .** If an activity "encourages teachers to take a role in community affairs," a teacher can get a day off with pay in Bloomington, Ill. The school board voted to pay Richard Scott for a day on which he attended a Masonic meeting, but turned down a request from co-worker Phillip Charkey for a day's honeymoon.

**Lunchroom frill . . .** There's been a lot of talk of frills in the classrooms, but now they're reaching into the lunchrooms, too. According to an announcement from Washington, pitted olives will soon be subsidized under the school lunch program. The government says the high calorie item will supplement the diet of children and, more important, stabilize the olive growing industry. We hope the tobacco industry doesn't need stabilizing next.

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a recent by-lined column in a West Coast newspaper. He contends that direct federal aid for school construction would prove unnecessarily costly. The money would first have to be collected in Washington, D.C., then redistributed to the states. Inevitably, he says, the federal government's "brokerage charges" would reduce the total amount of funds made available at the local level.

Under his alternative suggestion, such money would never travel to Washington at all. He asks that the Treasury Department permit taxpayers to deduct from their federal income tax that portion of their local taxes which goes to pay for the retirement of school construction bonds and interest.

In this way, says Goldwater, the individual taxpayer—granted a measure of relief—would more willingly support local efforts for additional school construction.

Whether the scheme would work or not is highly debatable. One clear fact emerges, however. Sen. Goldwater favors federal aid in school financing in order to avoid federal aid to schools.

### Ecrivez, s'il vous plaît

*A pert, young miss, flagged down by a gendarme in Paris for passing a red light, pulled to the curb. The policeman marched over, flipped open his book and briskly began to enter his report—then stopped.*

*"Ah," said he, "a school teacher." He snapped the book shut. "No fine for you. Instead, write 500 times, 'I must not jump the traffic light,' and bring it here tomorrow."*

### Ninth grade too early to choose career, study finds

No student should be forced to make a final decision about his vocation until he is beyond ninth grade, according to a study published by Teachers College, Columbia University.

Ninth graders, researchers declared, are not yet informed enough about the duties and work conditions involved to make binding career choices. Those youngsters who have been rushed into making decisions have often found their occupations dissatisfying later in life.

The study suggests that more attention be paid by schools to the provision of counseling to develop readiness for choice. Schools can help

View of the modern Ivanhoe Elementary School in Gary, Indiana, showing its walls of Natco Uniwall. The buff colored vertical walls show Uniwall's exterior rugg-tex finish. The light green panels under windows show a unique use of Uniwall's interior face installed in reverse. Architect: Jos. P. Martin & Assoc.

# Inside and outside walls of this modern school were built with one unit in one operation

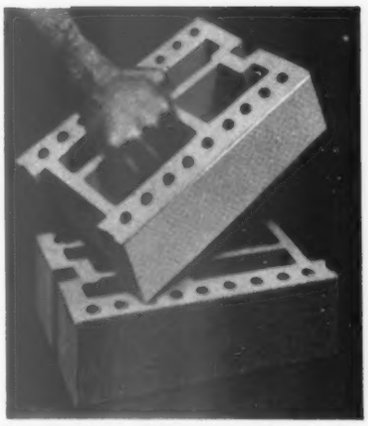
## . . . with "double-duty" Natco Uniwall

The Ivanhoe Elementary School in Gary, Indiana, is one of the forerunners of a new and functional type of building construction. Its walls are completely built of Natco Uniwall.

Uniwall is a single structural clay tile unit with two faces. Its *exterior* face has an unglazed rugg-tex finish that gives the appearance of high-quality brick. Its *interior* face has a durable ceramic glazed finish and is available in a variety of attractive colors.

"Laying up" both inside and outside walls in a single operation not only saves time, but also saves labor costs . . . when compared with other building methods.

Uniwall has excellent insulating qualities, is completely fireproof, is easily maintained and is durable. Consider modern, functional Natco Uniwall for your next building job. Write for catalog UW100-5.



Nominal Uniwall face size: 3⅝" x 11⅝"
Thickness: 7¾"

*Today's idea becomes tomorrow's showplace . . . when Natco structural clay products are in the picture*

**natco corporation**

GENERAL OFFICES: 327 Fifth Avenue, Pittsburgh 22, Pennsylvania . . . Branch Offices: Boston • Chicago • Detroit • Houston • New York • Philadelphia • Pittsburgh • Syracuse Birmingham, Alabama • Brazil, Indiana . . . IN CANADA: Natco Clay Products Limited, Toronto

# *Cuts a real swath!*

**SIX FOOT TWO!** That's a man-sized swath this 1960 Toro Sportsman* clips off with 2 gang units attached. Saves man-hours for you.

And this Toro's no toy. Under the rugged frame is a husky 30-inch reel unit with 6 tough blades on an oversize-diameter reel. Add two 25-inch gangs and you've got the full 74-inch swath for top efficiency.

There's power to spare in the mighty 5½ hp, 4 cycle engine, too! Breezes up hills like they weren't even there.

Still, you haven't heard the best news: the Sportsman takes a 42-inch snow plow blade, or a 30-inch lawn roller, or a 2 x 5 foot dump cart—or even a 32-inch triple-blade rotary mower unit with the exclusive Toro "Wind Tunnel" design. This Sportsman can save you time and money year around!

Like a demonstration on your own grounds? Simply call or write your nearby Toro distributor. He's listed in the classified section of the phone book under "Lawn Mowers."

**A registered trademark of Toro Mfg. Corp.*

**TORO**

TORO MANUFACTURING CORPORATION
3013 SNELLING AVE., MINNEAPOLIS 6, MINN.

(Circle number 739 for more information)

youngsters understand the personal and social factors involved in various pursuits. Once they are more thoroughly informed about these factors, they can make vocational choices better suited to their skills, abilities and personalities.

### Soda pop merit plan spurs students in Missoula, Mont.

For the past 15 years, top scholars in the grade schools of Missoula, Mont., have been jubilantly lapping up their reward—soda pop.

Begun as a promotional stunt by a local bottling company, the practice has since become something of a local tradition when report cards are distributed. To qualify for free pop, youngsters hurry to the bottling plant, after school is out, to have their report cards checked. Reports rated "excellent" merit six-bottle cartons; those considered "good" are worth one bottle of pop.

The local schools take no official stand on the practice, but many schoolmen privately admit that the program has spurred student effort in the classroom.

### Short skirts—short shrift

*Cheerleaders of New York's Hunter College High School never got on camera during the recent telecast of a local football game. The reason: their skirts were too short.*

*Under existing rules, cheerleaders' skirts cannot be more than five inches above the knee. Result: the Hunter girls sat out the game warming benches on the sidelines instead of cavorting before the crowd.*

### After-hours gym sessions keep schoolmen trim

Drop in at the gymnasium of the Julian Curtiss School, Greenwich, Conn., any Thursday after 4:15 and you'll find most of the school system's administrators. They'll be busy soaring above the trampoline or tensed to give their all for the deciding point in a hotly-contested volleyball game.

It's all part of a physical fitness program designed to help them relax while keeping in trim. So far, the program has been a rousing success with several of the officials adding to the laurels they've garnered in the educa-


# New Portable, Hi-Powered Vac for scores of cleaning chores!

## Versatile Papoose

*light as a breeze—powerful as a hurricane!*

Dirt, dust and grit have nowhere to hide with the Papoose on the job . . . it goes wherever they are. Completely adaptable for all vacuuming chores from factory production line to carpeted office.

Powerful, yet quiet, compact, lightweight (only ten pounds), the Papoose comfortably adjusts to fit the back of any operator, or convenient snap-on wheels can be used. Unit easily converts to high-powered blower. Speed-Clean tools available for every job. Think of all the places you could use the Papoose . . . and write today for full facts.

- 1 hp motor. Powerful dual-turbine fan system.
- Acoustical-lined Royalite housing insures quiet operation.
- Dual filters keep exhaust air clean, protect motor.
- Optional snap-on wheel attachment.
- Big capacity—618 cu. inches —more than ⅓ bushel.
- Weighs only 10 lbs.

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(Circle number 787 for more information)

# R. C. HUNTER. ASSOC. SUPERINTENDENT, BAKERSFIELD CITY SCHOOL DISTRICT.

Bakersfield, California, finds Royal Electrics "inexpensive to maintain."

"We've been using Royal Standard and Electric typewriters for several years," says Mr. Hunter, "and in those years we've found them very satisfactory. Royals are easy to operate and inexpensive to maintain." Which are two good reasons, Mr. Hunter, why over half the typewriters in the nation's classrooms are Royals.

Mr. Hunter also mentions another Royal plus:

"The service received from our local Royal Representative is always prompt and courteous."

And that's a nearly universal response from all school administrators and teachers to Royal service. You'll find that when your typewriters need maintenance, service is fast and dependable.

Why don't you investigate the beautiful new Royal Electric typewriters? You'll be glad you did. Call your Royal Representative for a free demonstration. Arrange for a classroom trial, if you like, at your convenience.

ROYAL® ELECTRIC

PRODUCT OF ROYAL McBEE CORPORATION. WORLD'S LARGEST MANUFACTURER OF TYPEWRITERS.

(Circle number 735 for more information)

## Complete responsibility centered in one specialized organization!

Undivided responsibility for *all* phases of a temperature control installation — from coordinated planning to future service — is the key to lasting owner satisfaction. Each Johnson System, small or large, is furnished on this basis, for 75 years' experience has proved it to be the *only* way to assure the kind of lifetime efficiency and operational economy you expect from your control system.

When you invest in a Johnson Pneumatic Control System you are investing in years of reliable performance, something hardly to be expected from scattered sources whose responsibility ends with the sale. With air conditioning, heating, and ventilating systems becoming increasingly complex, now it is even more important that responsibility for your control system be centered in one organization.

Johnson's way of doing business, as demonstrated in leading buildings everywhere, enables you to enjoy the very finest standards of indoor climate control at the lowest possible lifetime cost. When you build or air condition, ask your consulting engineer, architect, or local Johnson engineer for the facts about Johnson Control. Johnson Service Company, Milwaukee 1, Wisconsin. 105 Direct Branch Offices.

**JOHNSON CONTROL**

PNEUMATIC SYSTEMS

DESIGN • MANUFACTURE • INSTALLATION • SINCE 1885

(Circle number 759 for more information)

tional field. One elementary principal is reliably reported to be a "real terror" on the volleyball court.

Rope climbing and judo are out, say the schoolmen, but badminton is seriously being considered in an effort to expand the present program.

## Failure to keep order costs teacher her job

A teacher who cannot maintain classroom discipline has no right to her job, according to a recent superior court ruling in Chicago.

By so ruling, the court dismissed the suit of a teacher who had been fired because she couldn't keep her classes in order. The suit was for reinstatement with full back pay.

Mrs. Marie Thomas, a teacher with 10 years of experience in Chicago public schools, was fired by the board of education after its trial committee recommended her discharge. She had been assigned to three different schools over a two-year period, teaching elementary grades.

Mrs. Thomas said maintenance of order and discipline was impossible without the cooperation of principals and other officials. She said she received no such cooperation.

In reviewing the suit, Judge Donald S. McKinlay held that failure to maintain discipline was Mrs. Thomas' fault, but he could not ascertain whether this fault was inability or lack of interest.

### Basic education

*The drive for more emphasis on academic subjects, launched shortly after the first Sputnik, seems to strike school districts in different ways. For instance, note these examples of emphasizing the basic subjects:*

*In California, 15,000 high school students are being asked to buckle down and study a subject called "Real estate and its effect on your life." It will surprise no one to learn that the California Real Estate Association is the course's sponsor.*

*In East Liverpool, Ohio, Columbia County children are majoring in artificial respiration, safety practices and the use of water equipment.*

*And in Rutland, Vt., the school board has been asked to approve released time from classes, so that some of the students can learn how to ski.*

## Phoenix students say the price not right

In Phoenix, Ariz., school officials purchased some valuable property so high school students could park their cars. Students were, in fact, required to park on this property if they drove to school.

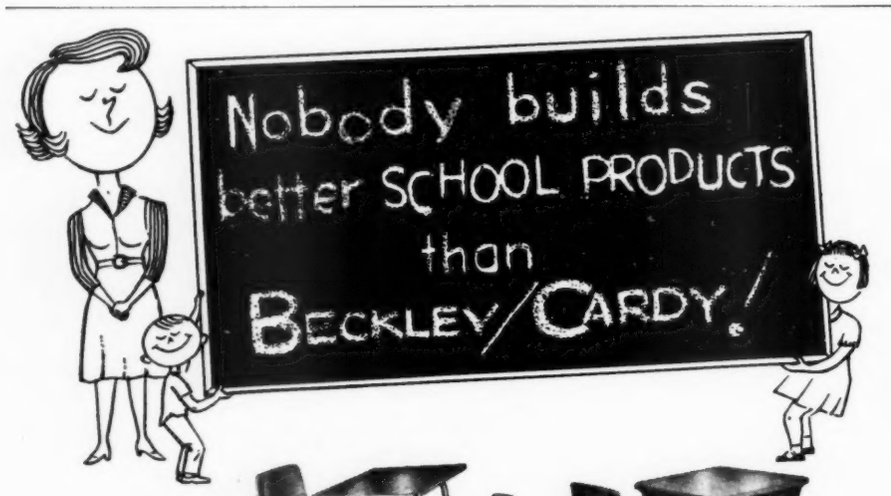
Recently, a $1 monthly parking fee was introduced, but the requirement to park on school owned lots was lifted. You can guess what happened: the students are back to parking on the neighboring streets.

## Public wants more aid to education

Parents throughout the country are becoming more and more aware of their children's education, and are in favor of more federal aid for this purpose, a recent poll shows.

The importance of specific issues such as taxes or civil rights varies from state to state, according to the poll, but in every state the concern about education was mentioned by roughly 20% of the interviewees. When complete

*continued on page 63*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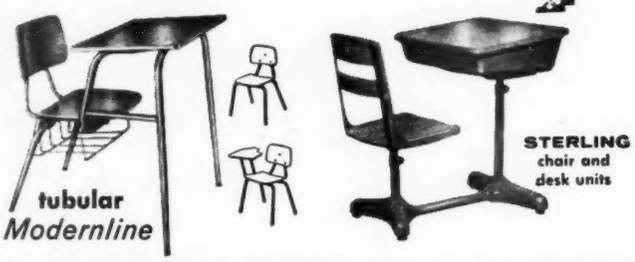


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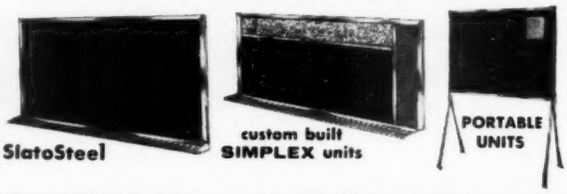
*Life of the building* SlatoSteel

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Reading, Numbers, and Writing Workbooks and Cards  Cut and Paste • Coloring Picture Posters

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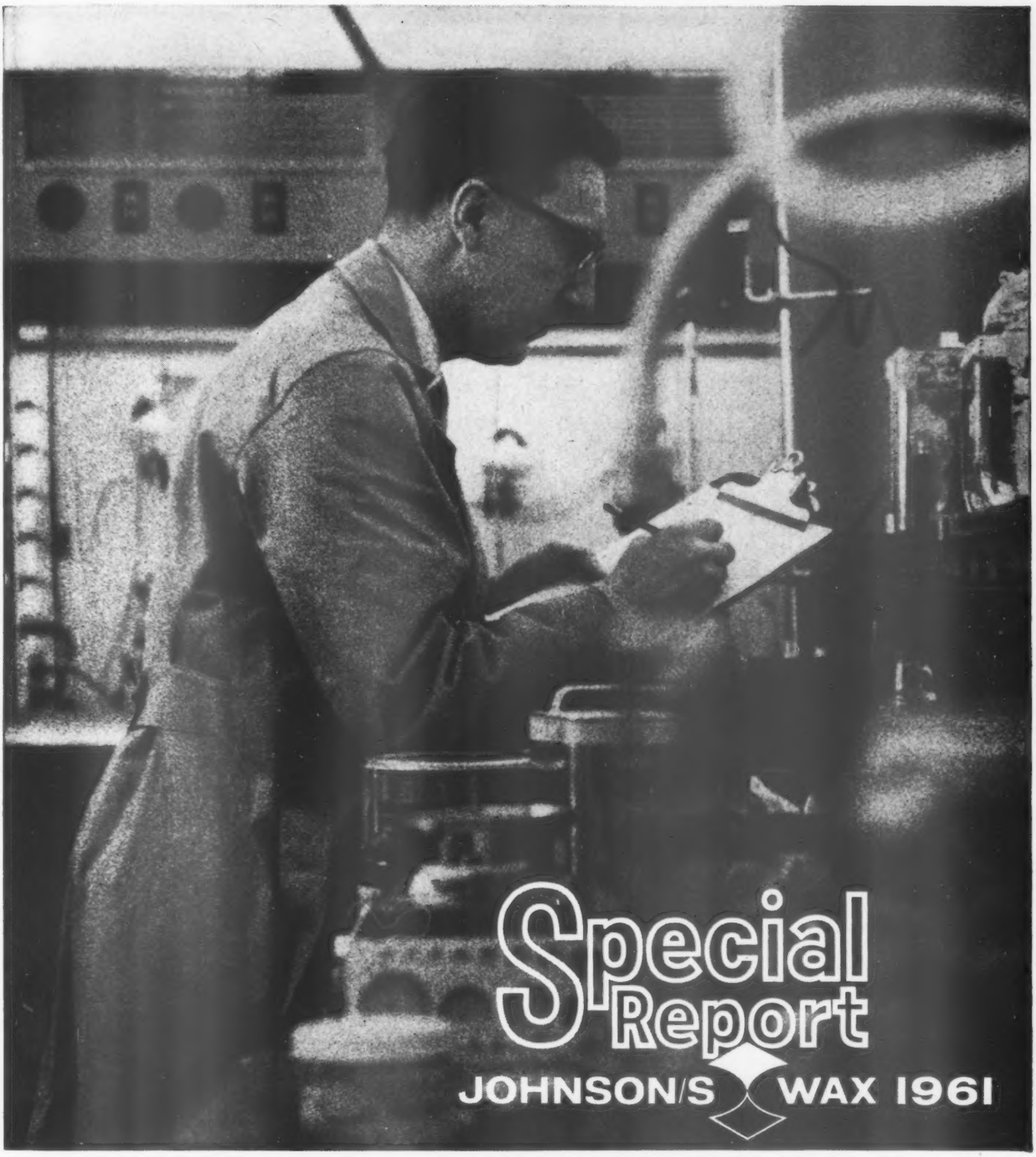
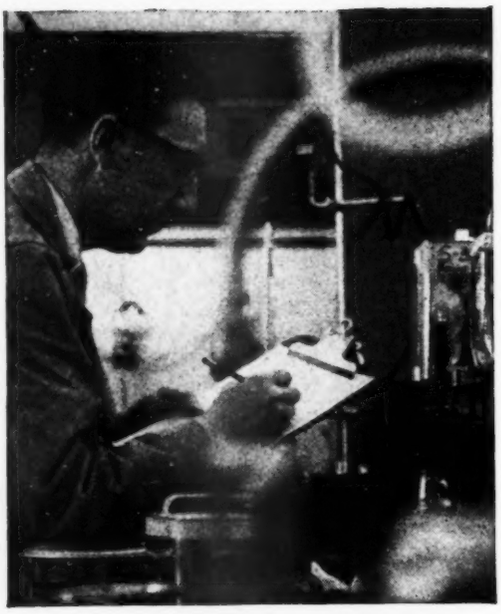



The Service Products Division Laboratory in Racine, completed in 1959, is devoted exclusively to development of products for maintenance and industry.

School maintenance today is a challenge. Schools everywhere must be better maintained than ever before. At the same time, costs must be kept down. ¶ This report tells how Johnson's Wax is helping meet this challenge with two new and better products neither of which even existed as little as two years ago.

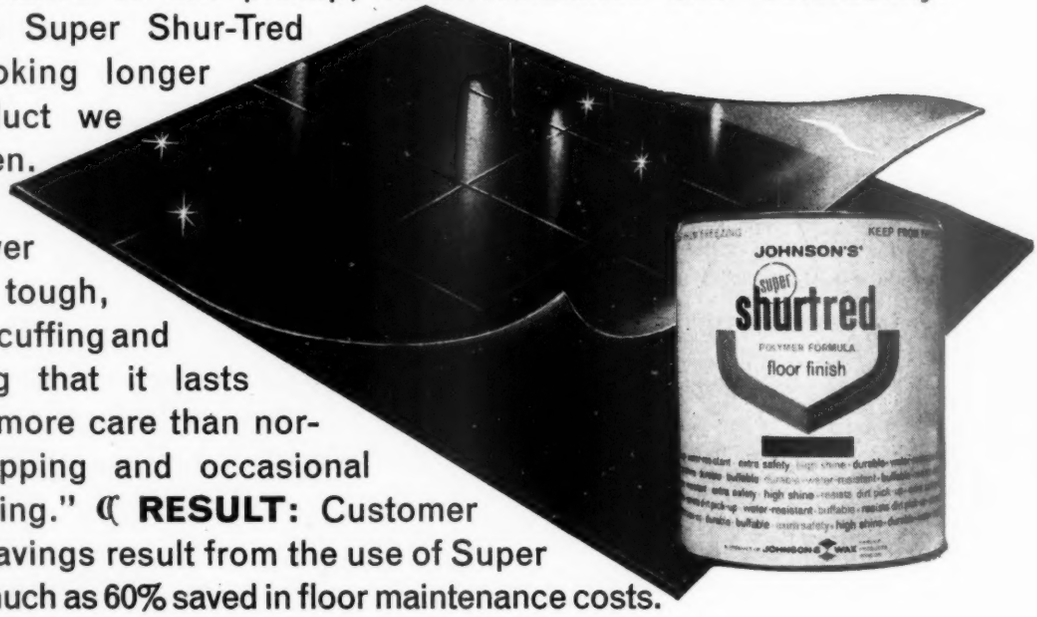


# Special Report

## JOHNSON'S WAX 1961

# A FLOOR FINISH THAT LOOKS BETTER, LASTS LONGER, requires less work to maintain...

For years people said they wanted a floor finish that wouldn't wear out fast, would resist marking, wouldn't require constant maintenance, and yet would permit "touch-up buffing" as needed. ¶ As a result of this demand, we introduced SUPER SHUR-TRED, a new polymer finish . . . because we knew a properly formulated polymer product could provide these qualities. ¶ We also knew, however, that none of the widely used commercial polymers possessed exactly the qualities needed. Therefore, our chemists designed and tailored a new and exclusive polymer. ¶ By creating our own polymer, we were able to build into Super Shur-Tred exactly the features most needed in a floor finish: high shine, resistance to rubber marking and scuffing, durability, resistance to dirt pickup, water-resistance and restorability. ¶ As a result Super Shur-Tred stays good-looking longer than any product we have ever seen. The polymer shield it puts over the floor is so tough, so resistant to scuffing and rubber marking that it lasts weeks without more care than normal damp mopping and occasional "touch-up buffing." ¶ **RESULT:** Customer reports prove savings result from the use of Super Shur-Tred—as much as 60% saved in floor maintenance costs.



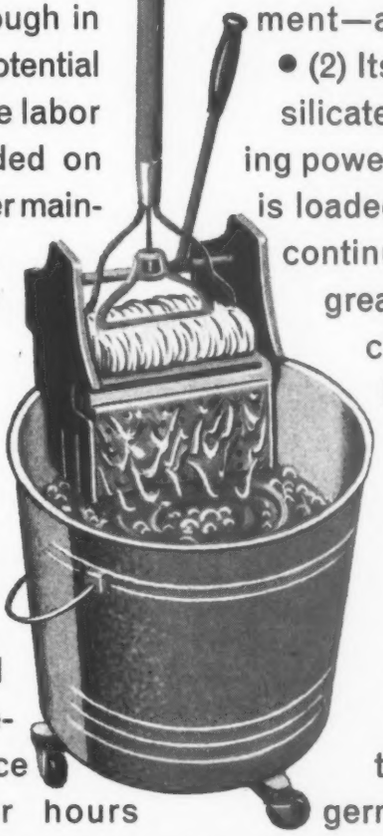
# Special Report

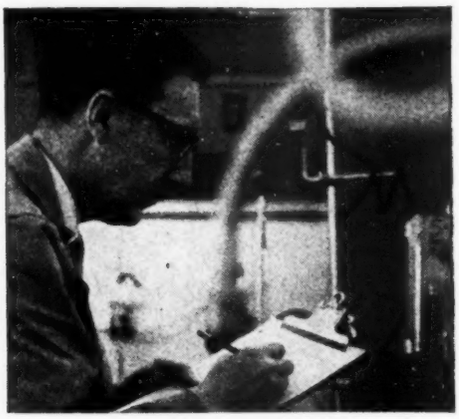
## JOHNSON'S WAX 1961

# AN ALL-SURFACE CLEANER THAT KEEPS ON CLEANING

### even after the solution gets dirty

Our new FORWARD Cleaner represents a major breakthrough in an area where cost-saving potential is greatest: More time, more labor and more money is expended on cleaning jobs than on any other maintenance activity. ¶ Until now, all cleaners—no matter how good they were when first poured into a bucket—started to lose cleaning power as soon as you put a dirty sponge or mop in them. Dirt deposited in the cleaning bucket quickly neutralized the solution and it stopped cleaning effectively, forced more trips to replace the solution and longer hours scrubbing while the job was being done. ¶ The Forward formulation as developed in our laboratories meets this problem in two ways: • (1) It is more powerful than so-called "neutral" cleaners. This power, however, is so controlled that it is as safe to use as the neutral cleaners on floors, walls, woodwork, equipment—all washable surfaces. • (2) Its power is buffered with silicates so it keeps its cleaning power even after the solution is loaded with dirt. Therefore it continues to cut through grit, grease and dirt when other cleaners have long been helpless. ¶ An added value in Forward is that it is an effective sanitizer. This is especially important in any public building where regular sanitization can decrease the danger of spreading germs in crowds. ¶ **RESULT:** More of your cleaning time is spent productively—less wasted—because Forward gives you all the cleaning power you pay for.





Is your school in a "Specification Rut"? Have your bids been calling for the same product specifications year after year after year? If they have, you're missing out on many newly developed products that are today revolutionizing school maintenance. Do your budget and your maintenance standards a favor: Make certain your specifications are up-to-date—call for today's best, work-saving, money-saving materials:

**SUPER SHUR-TRED®**—a floor finish that looks better, lasts longer, requires less work to maintain.

**STEP-AHEAD®**—the original, money-saving Polymer-"M" floor finish.

**FORWARD®**—an all-surface cleaner that keeps on cleaning even after the solution gets dirty.

**WAX-STRIP®**—a wax-removing product that prepares a floor for perfect application of any finish.

*Write for model specifications covering any or all the above products.*

**Call your local Johnson's Wax Distributor . . . or write S. C. Johnson & Son, Inc., Service Products Division, Box SM-3, Racine, Wisconsin.**

LET US SEND YOU THIS PROFESSIONAL
**FREE BUILDING MAINTENANCE MANUAL**

This 28-page reference book includes these chapters: Floor Type Chart; Cleaning the Floor; Finishing the Floor; Use of Special Finishes; Day-to-Day Maintenance; General Cleaning; Care of Equipment; Stain Removal; and many others. To receive your copy, simply write: Building Maintenance Manual, S. C. Johnson & Son, Inc., Box SM-3, Racine, Wisconsin.

(Circle number 698 for more information)

results of the poll were tallied, education was ranked in the same "problem" category as international relations, unemployment, civil rights and taxes.

Here's what one Alabama woman had to say:

"I'm worried sick about the schools around here. Things are terrible in my son's first-grade class. His teacher has more than 40 children to cope with and some of them can't even go to the bathroom alone. When she leaves the room, bedlam breaks loose and the big children beat the little ones. It's not her fault; she needs help. Anything that could be done to help our schools should be done. Even if it means federal aid."

## Sandburg "beat," say school text watchdogs

Florida lawmakers heard Carl Sandburg, one of contemporary America's towering literary figures, called a "beatnik" during a legislative subcommittee hearing on school textbooks.

The renowned poet-historian—along with several other prominent American writers—was upbraided by some Miami citizens who spoke out against textbooks which they considered dangerous and un-American.

One of the citizens' watchdog committees operated on a strictly scientific basis in arriving at its evaluations. According to its chairman, a textbook is considered to be "most dangerous" if as much as 2% of its content is "un-American."

## Talented teachers key to pupil progress, study finds

What is the best way to handle bright students? After five years of testing different approaches in their elementary schools, officials in Evanston, Ill., still don't have the answer.

The schoolmen tried segregating some of their talented eighth graders completely. Another group has been periodically taken from regular classes and given doses of advanced work under specially trained teachers. A third batch of students has taken on extra assignments within regular classrooms, while a fourth has been given double promotions. A fifth control group has proceeded normally, receiving no special attention.

What have the results of the five-year experiment demonstrated? Says Oscar M. Chute, Evanston superintendent, "We are unable to distinguish any perceptible difference or superiority. . . . Our ultimate goal . . . must be to provide every student . . . with a good teacher."

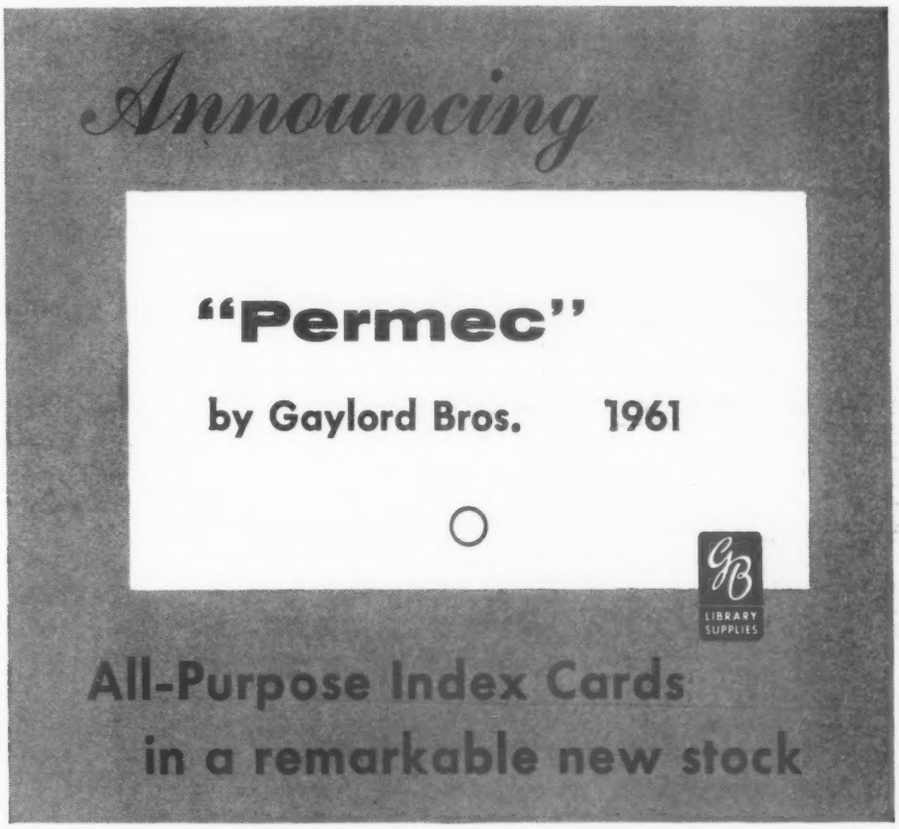
## College students proctor high school study halls

Looking for a way to find more teaching hours in an already crowded high school schedule? Follow the lead of Canton South High School, Canton, Ohio.

Schoolmen there have made 21 additional teaching hours available through the employment of two students to proctor study halls. They work with one staff member who devotes full time to study hall duty.

Says Harold Walker, executive head of Canton Township School District, "Carried out for a year . . . our schools will save $8,440." In addition, he points out, three teachers are freed to devote more time to teaching. What's more, each of the school's 13 department heads is free for one period a day to observe and confer with teachers in his department.

The two student proctors check attendance during study periods, ap-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An important development resulting from recent experiments in the field of permanent book papers is a new chemical wood stock. Research-proved for qualities of strength, utility and longevity, this stock is now being used to make Permec Cards by Gaylord Bros.

Seldom has a development in card stock so excited our enthusiasm. These sturdy, all-purpose index cards conform fully to Gaylords' high standards in weight, caliper "snap" and erasing qualities.

Surface is excellent for printing or typing, truly a superior record card . . . ideal for catalog cards, shelf and special lists, and other files where long life and economy are essential.

**Permec Index Cards** by Gaylord Bros. are rotary cut to 12.5 x 7.5 centimeters and punched for guide rod. Available blank or with red guide lines.

*•Write today for complete information and price list.*

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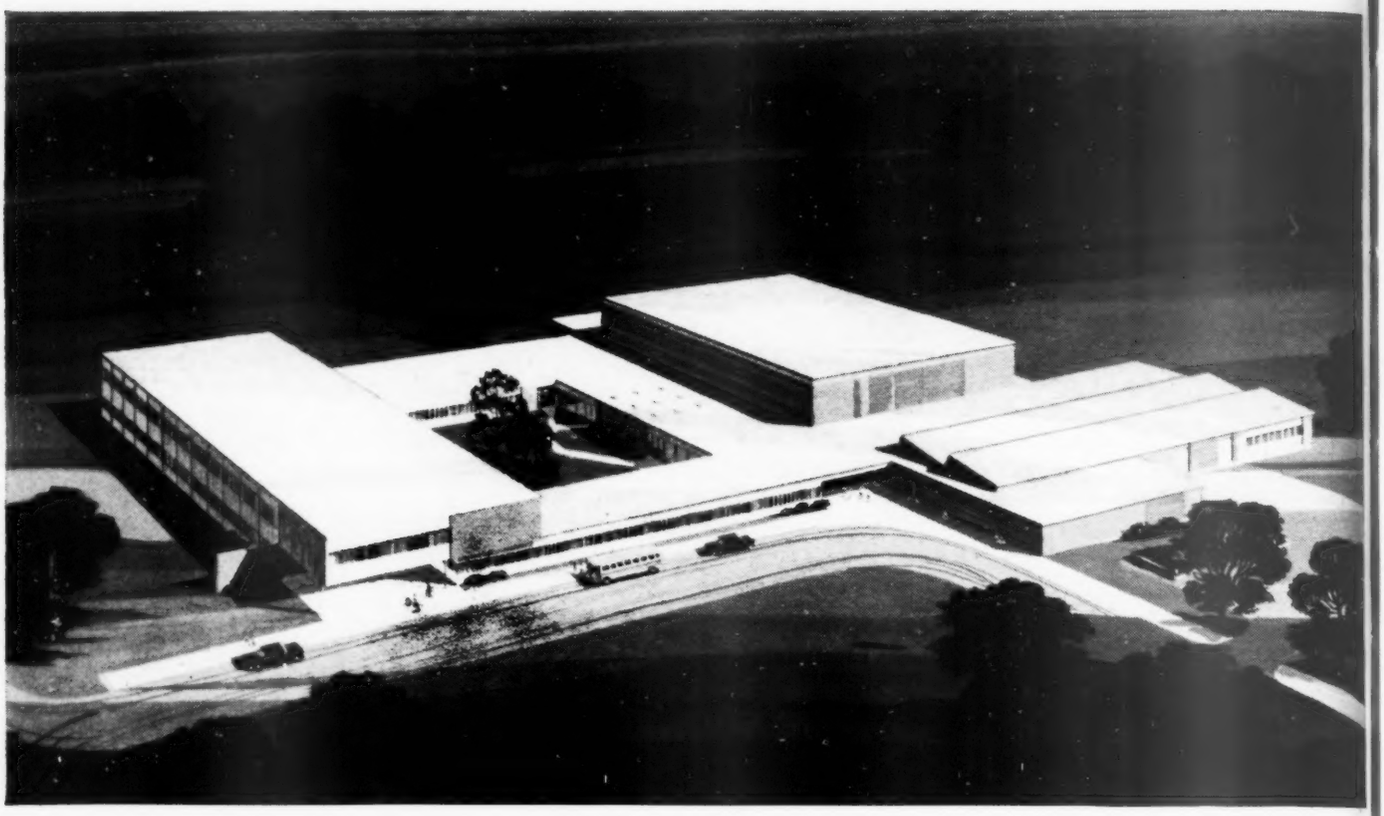


*In the new Batavia Senior High School, Batavia, New York...*

# NEW CARRIER HEATING AND VENTILATING SYSTEM PROVIDES 9 MAJOR ADVANTAGES YET COSTS LESS

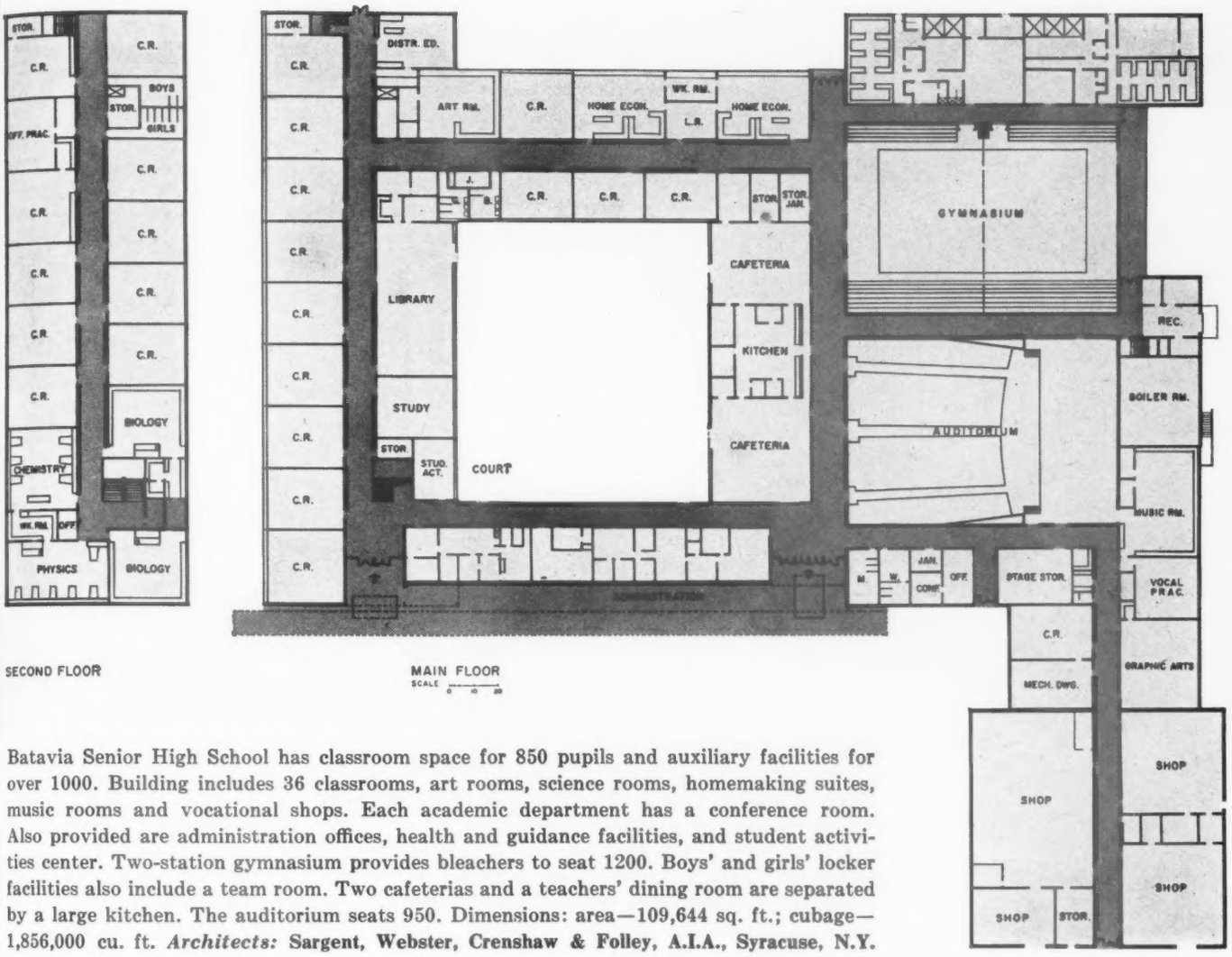
This modern high school offers an excellent example of how any new school can enjoy a superior heating and ventilating system at less than the cost of ordinary unit ventilators. And this new kind of system is ready for immediate conversion to year-round air conditioning with the simple addition of packaged refrigeration equipment in the machine room.

In planning Batavia Senior High, the architects considered unit ventilators and several popular central station systems. They carefully compared the performance characteristics, maintenance requirements, first cost and operating cost of each method. Their conclusion: The new Carrier 37E All-Air Weathermaster* System provides the highest quality automatic heating and ventilation currently available to schools. It is the easiest to convert to complete year-round air conditioning. It costs 10% less, installed, than the next best method. And it costs less to operate and to maintain than other automatic systems.

The nine important advantages of the 37E Weathermaster System which led to these conclusions are listed on the opposite page. They are unique because Carrier 37E units are the only room terminals which combine the performance benefits of the induction principle with either high or low velocity air distribution and the superiorities inherent in all central station systems.

If you are planning a new school, it should be well worth your while to look into the Carrier 37E All-Air Weathermaster System—either for heating and ventilation only, or with an eye to future air conditioning. The nearby Carrier office will be glad to give you, your architect and consulting engineer complete facts on the system. Or you may write to Carrier Air Conditioning Company, Syracuse 1, N. Y.

*Reg. U.S. Pat. Off.




Batavia Senior High School has classroom space for 850 pupils and auxiliary facilities for over 1000. Building includes 36 classrooms, art rooms, science rooms, homemaking suites, music rooms and vocational shops. Each academic department has a conference room. Also provided are administration offices, health and guidance facilities, and student activities center. Two-station gymnasium provides bleachers to seat 1200. Boys' and girls' locker facilities also include a team room. Two cafeterias and a teachers' dining room are separated by a large kitchen. The auditorium seats 950. Dimensions: area—109,644 sq. ft.; cubage—1,856,000 cu. ft. *Architects:* **Sargent, Webster, Crenshaw & Folley, A.I.A., Syracuse, N.Y.**


## Only the Carrier 37E All-Air Weathermaster System offers these 9 advantages for heating and ventilating

**1** Positive ventilation and air circulation under all conditions and seasons for improved odor dilution. Constant air volume from units.

**2** Quieter operation—no fans or other moving equipment in classrooms, with all powered equipment located in machine room for easy servicing.

**3** Superior air filtering at central station—minimum filter maintenance.

**4** No costly wall openings, subject to rain and wind leakage, required in classrooms for ventilation air.

**5** No operation of fans required for night and week-end heating, with gravity heating handling the load.

**6** Individual temperature control in every room solves zoning problems; air damper assures easy initial system balancing, requires no adjustments thereafter.

**7** Valuable classroom floor and wall space is saved by the compact units; cabinet only eight inches deep.

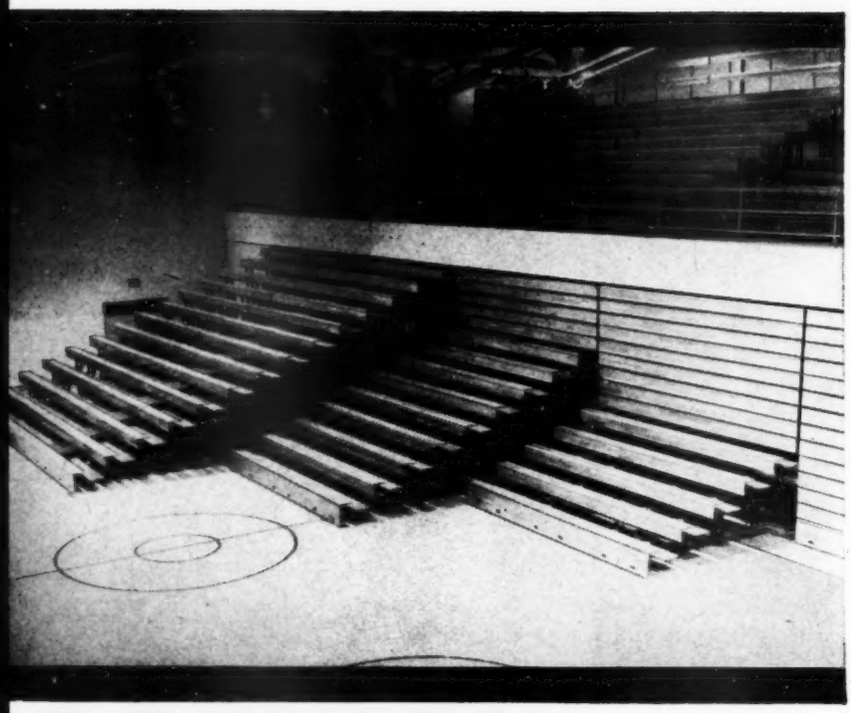
**8** Remarkable new Carrier Air Purifier may be included in central system for automatic filtration, automatically regenerated odor absorber and winter humidification.

**9** Easily and economically converts to full-year-round air conditioning at any future date with simple addition of packaged water chilling machine in central apparatus room. No revision of classroom units, controls or air ducts required. Condensate drains not needed. Nominal conversion cost about 65c per sq. ft., or less.

*MORE PROOF OF*
*BETTER AIR CONDITIONING FOR EVERYBODY* *EVERYWHERE*
Carrier

(Circle number 711 for more information)

# get versatile gymnasium seating for your new or present school building



# SAFWAY

## TELESCOPING GYM SEATS

**permit quick, easy set-up changes for every gymnasium event**

YOU CAN assure profitable *full-time use* of your school gymnasium —planned or existing—with this modern equipment, available in recessed, wall-attached, movable and reverse-fold types. Seating set-up changes are made quickly to fit every event. Any number of rows can be locked open (*see photo*). Safway telescoping gym seats give you these practical advantages:

**SPECTATOR COMFORT**—Good sight lines from every seat. Ample foot and knee room; comfortable inclined seats.

**COMPLETE SAFETY**—Full protection for spectators, gym users and maintenance personnel.

**FLOOR PROTECTION**—Non-marking wheels roll in separate tracks to prevent grooving.

**EASY OPERATION**—Straight-line tracking with extra-large wheels and nylon glides. Motorized operation available (*not needed under 14 rows*).

**GOOD LOOKS**—Seats nest back into a handsome vertical cabinet. Safway's rich, warm Golden Oak finish will be in harmony with any interior.

SAFWAY

see our catalog in Sweet's or write for copy

25 YEARS DESIGNED BY SAFWAY

**SAFWAY STEEL PRODUCTS, INC.**
6228 W. State Street
MILWAUKEE 13, WISCONSIN

WRITE FOR BULLETIN 161V

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prove passes, issue library permits and maintain discipline. Both are pleased to be actively at work in education while still attending college. They feel they're gaining first hand experience. Moreover, the assignments help them finance their college educations.

### Turnabout fair play

*Some New York City parents got a taste of their own medicine recently when their children were permitted to check on their progress in the classroom.*

*The principal of the Bronx Park and Youth Adult Center in Columbus High School invited the youngsters to sit in on adult sessions at the center. Most parents survived the experience. But we'll bet that—in some Bronx households—Junior is now definitely in command as he snaps off the TV set of an evening. He probably grins as he says, "Homework first, Mom. Then you can watch television."*

## 'Children walk to safety as school burns'

That was the refreshingly different headline on a recent *Los Angeles Times* story about a fire at Roy Maryott School in Palmdale, Calif.

No one was the least bit hurt as 82 first and second graders filed calmly out of the burning building. About $8,000 worth of damage was done to the school. When the danger was past, the youngsters returned and resumed their studies in rooms untouched by the fire.

It's good to know that not all school fires result in tragedy and death. Most of them, in fact, do not. Our hat is off to the *Los Angeles Times* which considered it news when the schools avoided a tragedy through good training, control and discipline.

## Slow pupils not slow, but comfortably silent

The slow student may not be as slow as he or his teacher thinks he is, according to a research study made at Michigan State University.

Working with 600 ninth-grade English students, Dr. Elizabeth M. Drews concluded that some children, overwhelmed by the vocal response of superior students, rarely, if ever, say anything. She said superior students

*continued on page 70*

# *Here's the whole story on* ENVIRONMENTAL HEALTH *in* SCHOOLS

**How the Airkem Program can rapidly increase comfort and well-being...help toward attendance records and good marks...make for better relations with parents, students and the community... yet add little to your budget.**

Nothing gets faster results! Everybody benefits from a better health environment. Children "do better in school." Illness drops, attendance climbs. Teachers, parents, visitors will heap praise upon you when you give the school a clean, odorless, agreeable and *healthful* new "climate."

It's easy with the Airkem Program—a scientific but extremely simple way to improve living conditions and health conditions in every school area, including corridors, gym, auditorium, rest-rooms, locker-rooms, classrooms, teachers' lounge, even the school bus! At the same time, this program takes care of all cleaning, disinfecting and insecticide needs.

**Airkem gets to the heart of the problem**

The Airkem program is the only *complete* program of basic sanitation maintenance. It thoroughly cleans all surfaces. It kills bacteria—kills insects. And it kills odors by counteracting them. No strong perfumes or chemical smells are added.

There's no mystery about it! All you do is see to it that the proper Airkem product is used in the proper way in its proper place in the school. Procedures are simple, easy to put into practice.

**And here's more good news!**

Often these Airkem procedures actually *save money* and *save time*. How? By combining two or even three housekeeping jobs in one operation, thereby eliminating duplication of effort and freeing your maintenance staff for other work.

And what a job these Airkem products do! The strongest, most obnoxious smells are met and conquered—rest-room, laboratory, kitchen and wet-clothing smells that had to be "lived with," or so you thought. No more!

**Only Airkem offers this program**

The program hinges on a unique and exclusive Airkem technique, that involves *combining* natural odor-counteractants with the ingredients of commonly-required maintenance products. As a result, Airkem products do not contaminate the environment as ordinary maintenance products do. Instead, they produce an air-freshened effect, while performing routine maintenance tasks.

No other cleaning product, or sanitizing product, or insecticide product is "like" an Airkem product. No other program of sanitation maintenance is "like" the Airkem program.

Call your nearby Airkem representative for a survey, and demonstration. There is no charge. You will be amazed by the helpful and useful environmental health data he will place in your hands.

**Airkem products are safe.** *No Airkem products contain formaldehyde. None release ozone. None can induce an anesthetic or narcotic effect on nasal tissue or the perceiving senses.*

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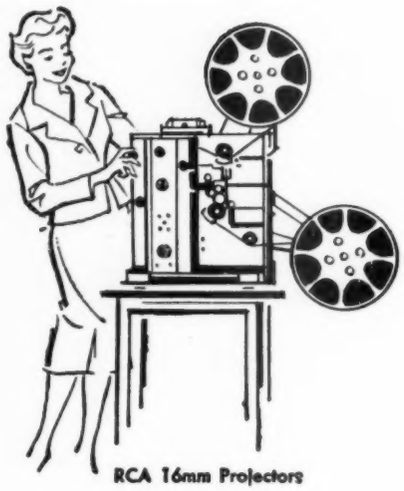

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In terms of function you are getting equipment which has been fashioned to help teachers teach *more* students *better*. Equipment which can bring a mountain of illustrative material—indeed any facet of world culture which has been recorded on film, tape or disc—into the classroom at the flick of a switch. Equipment which enables the teacher to devote more time to individual students, and which helps students to learn faster and retain more. Equipment which reduces the drudgery of drill for the teacher and which stimulates him to more creative effort in the classroom.

# FOR "ACROSS—THE—ROSTER" USE

RCA Educational TV Receivers

RCA Teaching Devices—Language Laboratories and Electronic Trainers

In terms of product you are getting quality equipment from a company which is no electronics-come-lately in the educational field. RCA has been making 16 mm sound projectors for thirty years, and school sound systems for more years than that. This experience is reflected in an extensive line of products which provide dependable performance.

RCA's long association with the educational market has resulted in products specifically designed to meet this market's unique needs. For example, every product in the line features ease of operation and ruggedness of construction. With RCA Electronic Tools for Education you get equipment whose simplicity encourages use; equipment which will withstand the onslaughts of even the most spirited students, and which will give you on-schedule performance in class after class.

The modular construction of both language laboratory equipment and sound systems is another evidence of RCA's thoughtful design. These products were engineered for growing schools. You buy to meet your present needs only; expand when you need to. But, like the extra length in junior's trousers, the expansion is planned for. Thoughtful design permits the installation of additional equipment in short time and at a low cost.

Because of the dynamic nature of the electronics business, you get important value in research, too. RCA's intensive research programs in the broad areas of defense, consumer and industrial electronics result in a stream of remarkable discoveries, many of which have direct application in the educational field. From this sharing of research comes a constant series of innovations for product improvement at a quite low cost.

Looked at from any angle, RCA Electronic Tools for Education are an outstanding buy. They represent a uniquely low cost-per-student investment for a group of products whose value to education stands second only to the teachers they serve.

**For more information, write RCA, Educational Electronic Audio Products, Bldg. 15-1, Camden, N. J.**

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talk in class about 10 times as much as the typical slow student.

"The slow student is so used to being at the bottom of the heap," Dr. Drews found, "that he may actually feel comfortable there and make no attempt to improve himself.

"But when allowed to compete with others on the same intelligence level, the slow student not only reads and recites more, he actually becomes more confident, likes school better and is readily accepted socially and intellectually."

Dr. Drews pointed out that when teaching by ability groupings is practiced, the student should be given his choice and be told that his class is slow, average or superior.

### Applied learning

*All was serene during a recent engineering examination in London, England, until the proctors suddenly swooped down upon one student in the class and disqualified him.*

*He hadn't been peeking surreptitiously at crib notes. Nor had they found open textbooks in his immediate vicinity. The student had aroused suspicion, though, by appearing to be listening intently throughout the exam.*

*Upon investigation, the proctors had discovered his fiancee, hidden in a nearby loft, broadcasting test answers to him via a small transistor radio.*

## Self-contained classroom dropped in learning experiment

Can elementary youngsters learn faster and better outside the self-contained classroom? Schoolmen in Montgomery County, Md., are seeking the answer in a five-year experimental program now underway in Bethesda Elementary School.

Fourth, fifth and sixth grade students at the school change classrooms —and teachers—three times a day under the new plan. Each grade is divided into three ability groups, based upon skill in reading and arithmetic. The groups spend their day with three different teacher specialists —one in social studies, another in language and reading, and a third in science and arithmetic.

Grouping is flexible, explains Bethesda's Principal Fred L. Barnette. Students moved from group to group or grade to grade as required during the year. The progress of the Bethesda youngsters, he says, will be measured against that of pupils in Montgomery County who attend school in self-contained classrooms.

The experiment has been underway for only a year, so few conclusions have been drawn about it as yet by school authorities. But, Barnette reports, parents and teachers are enthusiastic about the new program. Many parents report an improvement in their children's study habits and an increased interest in school work under the new plan.

## Teacher's salary stopped while in public office

A teacher elected to public office cannot draw his regular school salary while serving out his term. That was the recent verdict of board members of School District 1, Great Falls, Mont., in passing on the case of State Representative-elect William E. Spahr, English instructor at Great Falls High School.

Extra pay for special work is something else, however. Spahr, who supervises publication of the high school yearbook and newspaper, will continue to draw $500 yearly for that job while occupied at the state house.

## Teachers go back to school to study the second "R"

Despite what you may hear to the contrary, teachers *are* concerned about their students' handwriting. In fact, in Richland, Wash., 20 teachers from kindergarten through seventh grade are enrolled in a six-week course designed to improve their penmanship. They feel they'll do a better job of smoothing out their pupils' scrawls if they improve their own handwriting first.

The teachers are getting instruction, too, in handling special problems such as left-handed writers. In addition, they learn remedial techniques for improving students' handwriting.

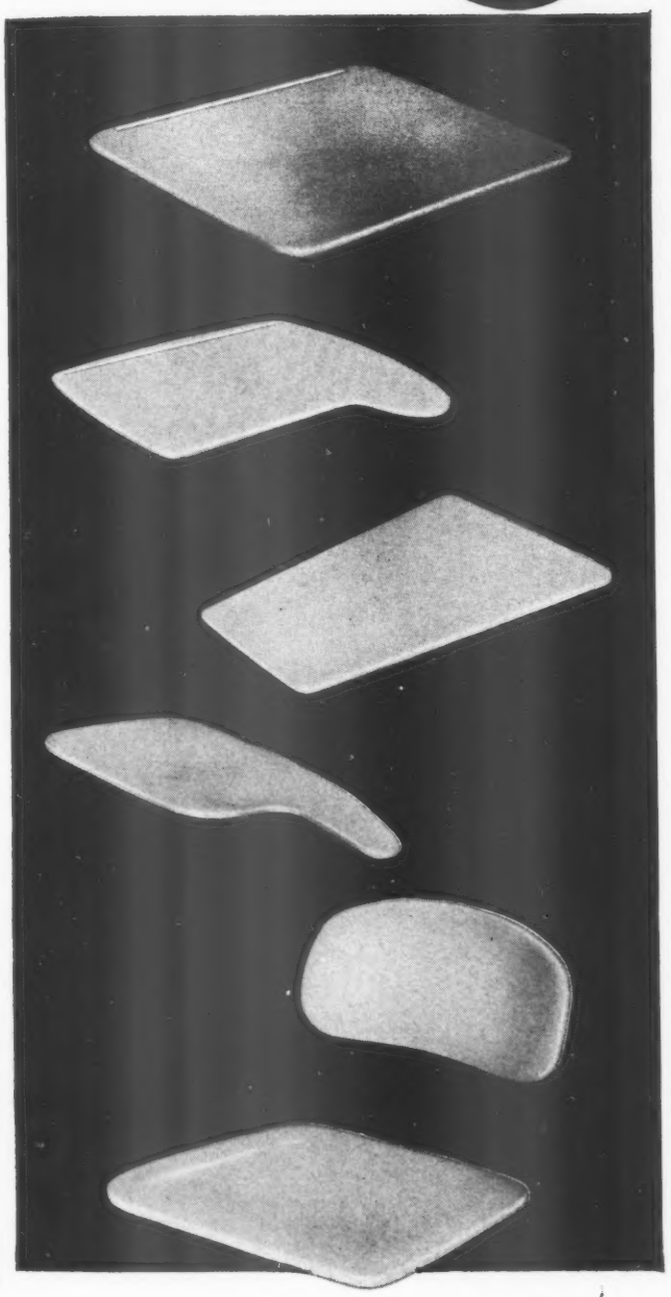
## Houston students grouped on basis of performance

High school students in Houston, Tex., are grouped in classes by performance—not ability—in an attempt by administrators to reduce the number of failures.

The plan allows students with top

*continued on page 74*

# For "Student-Proof" School Furniture — specify... COREX®



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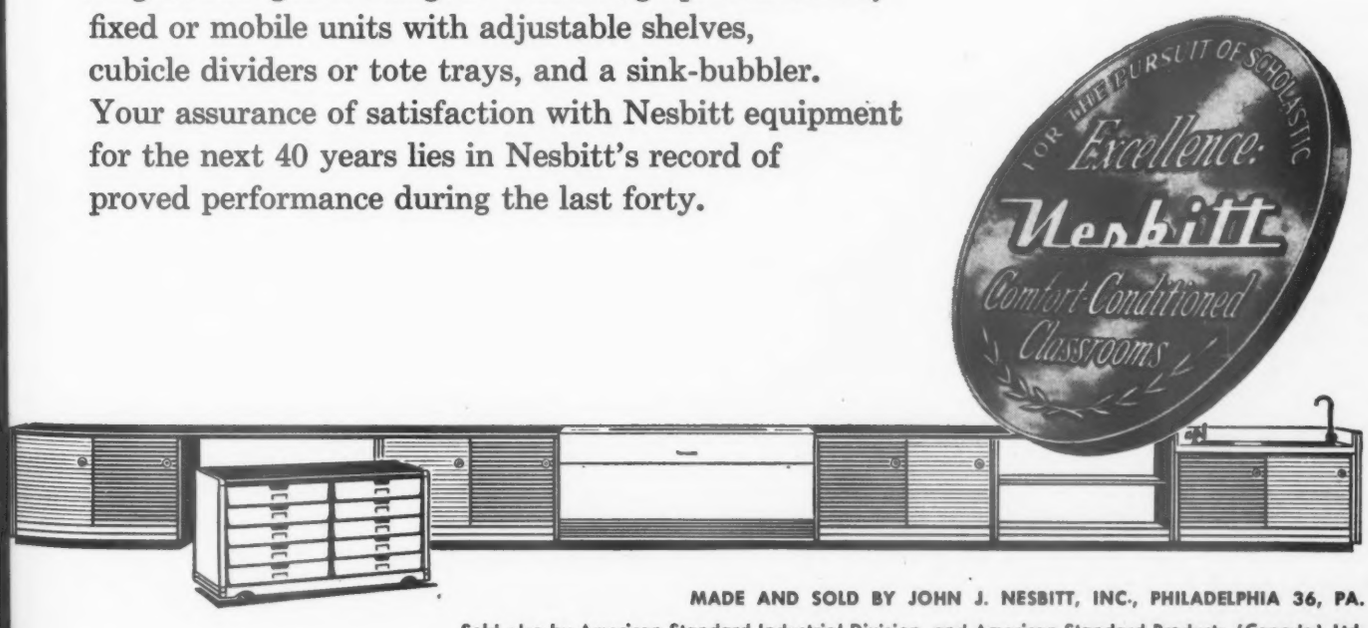


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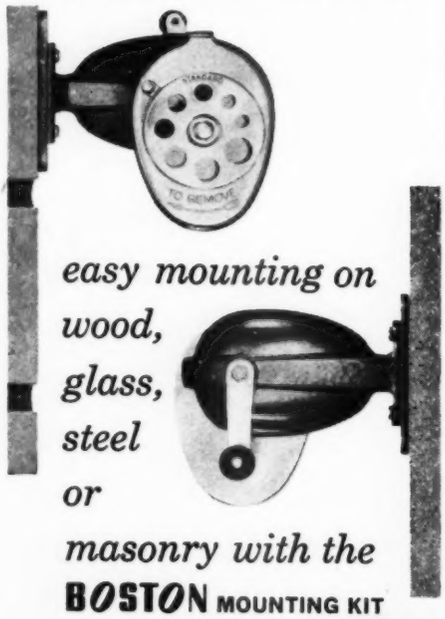

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grades to take stiffer courses. No achievement tests are given for this purpose; no studies are made of the pupils' minds. The students take advanced courses simply on the basis of their grades. Students with marks lower than "B" are not permitted in the advanced curriculum.

The idea grew out of an experiment which was abandoned last year. This required failing students to study for one extra period daily. Reports Paul Cauthan, principal of Smiley High School: "We had many students who failed because they should not have been taking the course that challenged them too much. The failing students remained after hours. We had to retain teachers, too, and make special bus runs."

Under the new plan, officials expect good results—and good grades from students—without the extra period.

### Stamp of approval

*Before approving a purchase, the school business manager conscientiously checks quality, price and value. Now he may have to add another test to his list of considerations—trading stamps.*

*A chalkboard manufacturer has recently announced that he will give trading stamps with the purchase of any of his goods and services. If the scheme catches on, purchasing officials may have to resort to written handbooks on premium selection for schools. But an even greater problem is sure to arise. Who will be assigned the task of licking all those trading stamps and pasting them in neat rows in the stamp books?*

## Teacher's handbook spells out the meaning of communism

How do you answer a student who asks, "What's wrong with communism?" Sixth grade teachers in Washington, D.C., now have the answers at their fingertips. A newly prepared teacher's guide explains the differences between communism and capitalism in terms sixth graders will understand.

One purpose of the guide, says Superintendent Carl F. Hansen, is to provide students with the facts they need to understand both systems. Another—equally important—is to help them appreciate the greater freedom that is theirs under capitalism.

The guide contains an outline which gives detailed instruction in the his-

*continued on page 78*

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Corkrobe —combination wardrobe rack and corkboard

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Provide completely flexible wardrobe system that permits and efficiently adapts to, any Sunday school layout. Saves space, answers the wraps problem, provides readily moveable screens and room dividers "chalk boards" and "cork boards" always needed in schools. Shelves adjust to heights for every age group. Permits quick conversion of Fellowship Room into multiple classrooms.

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**WAX "A"** costs less per gallon, but you must strip and rewax far too often.

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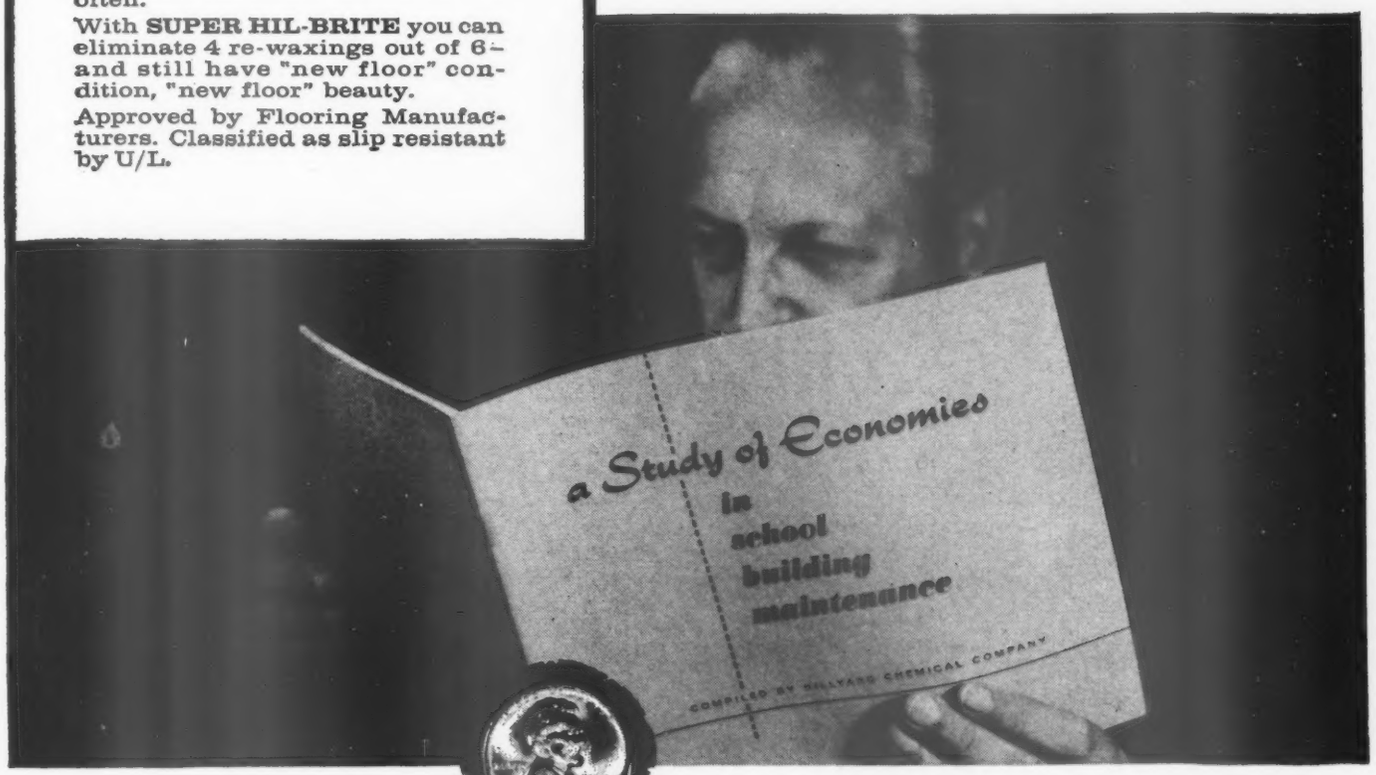
**National Association of Building Owners and Managers.*

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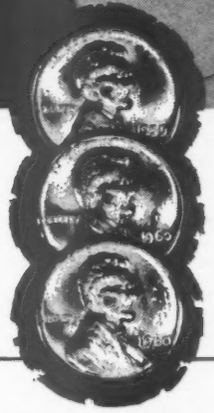

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# SOLEX® glass protects their eyes...

In the corridors, PPG polished plate glass was used in the upper sections and HERCULITE shock-resisting tempered plate glass was below where damage could occur.

# ..HERCULITE® protects the school

Large expanses of glass create a feeling of unlimited spaciousness in the new Quincy, Illinois, Senior High School. Glass performs many practical functions, too. PPG SOLEX green tint, glare-reducing, heat-absorbing glass not only protects young eyes from solar glare but keeps classrooms cooler in summer. HERCULITE tempered plate glass, because it is four to five times stronger than regular plate glass of the same thickness, provides plenty of impact resistance in corridor areas likely to receive the most abuse.

Polished plate glass, SOLEX and HERCULITE are deftly woven into the design pattern to produce a brilliant, modern look which opens the building to the whole outdoors.

For more information on any of these products, write Pittsburgh Plate Glass Company, Room 1103, 632 Fort Duquesne Boulevard, Pittsburgh 22, Pennsylvania.

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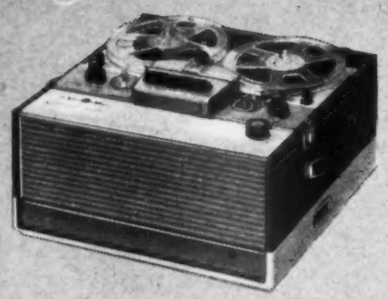

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**V-M's 'tape-o-matic'® 4-Track Stereo Record Tape Recorder** adds interest-holding realism of stereo to your audio-visual programs. You can make your own stereo recordings easily, to fit your exact requirements. The new tape recorder is a four-track unit with simple push-button controls. Two microphones are included for professional-quality stereophonic recordings. V-M's "*Add-A-Track*" *feature* makes possible unique new teaching and self-training techniques.

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With complete simplicity in operation, V-M's Synchronizer adds inaudible slide-change cues to tape recorded commentary. On play-back, these cues actuate your remote-control projector, automatically advancing slides at the times selected!

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tory, culture, economy and geography of the USSR. Also suggested: study of the development of the governments of the United States and the USSR since their respective revolutions.

## Bus discipline problems nil with teacher-operators

Youngsters in Weston, Conn., think twice before creating disturbances on school buses. The reason is simple: the drivers are teachers.

School officials, unable to find enough applicants to man the district's 10 buses, offered the job to teachers. Six instructors from the town's junior high and elementary schools volunteered to take on the extra assignment which pays them about $1,000 a year.

## Flashing signs limit speeds near rural Ohio schools

The Ohio Highway Department is trying to take the guesswork out of driving speeds in rural school zones.

In 20 school districts, safety engineers are installing yellow and red flashing neon signs which limit driving speeds to 20 mph during periods when children are entering or leaving school.

The signs, costing $1,000 each, are put in operation by push-button control. The unit flashes for an hour, then shuts itself off.

The signs were purchased and installed by the Highway Department, but each school will pay for its own electricity—about $3 monthly.

## Ban on flying model planes grounded in Florida schools

Air-minded youngsters in Florida's Dade County schools breathed sighs of relief recently, and went back to flying model planes from school tarmacs.

For a while, it looked as though they'd be permanently grounded, but a proposal to prohibit them from sending models winging through the wild blue yonder near school buildings was voted down by the Dade school board.

The ban had been proposed by Superintendent Joe Hall after receiving numerous complaints about the noise and the hazard to other non-flying enthusiasts using school playgrounds.

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| Item | Selling Price | Profit | Cost of Eqpt. |
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| In mega-phones | 15c | 10c | 15.00/500 cfm. |
| Sno-Kones | 10c | 8c | 149.50 |
| Cotton Candy | 10c | 9c | 275.00 |
| Cold Drinks | 10c | 7½c | 50.00 |
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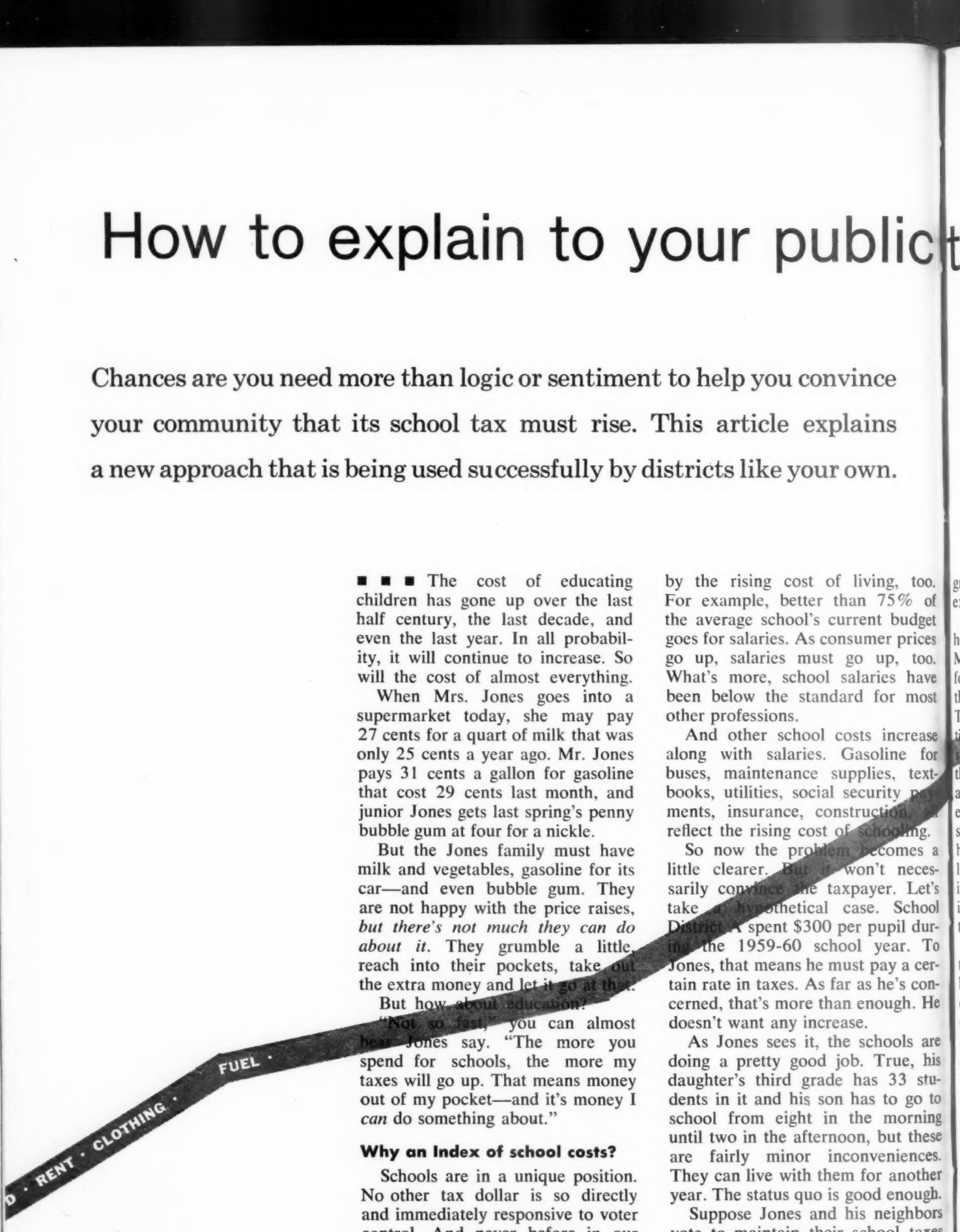
# How to explain to your public th

**Chances are you need more than logic or sentiment to help you convince your community that its school tax must rise. This article explains a new approach that is being used successfully by districts like your own.**




■ ■ ■ The cost of educating children has gone up over the last half century, the last decade, and even the last year. In all probability, it will continue to increase. So will the cost of almost everything.

When Mrs. Jones goes into a supermarket today, she may pay 27 cents for a quart of milk that was only 25 cents a year ago. Mr. Jones pays 31 cents a gallon for gasoline that cost 29 cents last month, and junior Jones gets last spring's penny bubble gum at four for a nickle.

But the Jones family must have milk and vegetables, gasoline for its car—and even bubble gum. They are not happy with the price raises, *but there's not much they can do about it*. They grumble a little, reach into their pockets, take out the extra money and let it go at that.

But how about education?

"Not so fast," you can almost hear Jones say. "The more you spend for schools, the more my taxes will go up. That means money out of my pocket—and it's money I *can* do something about."

### Why an Index of school costs?

Schools are in a unique position. No other tax dollar is so directly and immediately responsive to voter control. And never before in our history has the average tax paying citizen been so deeply involved in school affairs. He is literally *driven* there by the tax burden he carries—and by the opportunity for control of the expenditure.

Of course, schools are affected by the rising cost of living, too. For example, better than 75% of the average school's current budget goes for salaries. As consumer prices go up, salaries must go up, too. What's more, school salaries have been below the standard for most other professions.

And other school costs increase along with salaries. Gasoline for buses, maintenance supplies, textbooks, utilities, social security payments, insurance, construction, all reflect the rising cost of schooling.

So now the problem becomes a little clearer. But it won't necessarily convince the taxpayer. Let's take a hypothetical case. School District A spent $300 per pupil during the 1959-60 school year. To Jones, that means he must pay a certain rate in taxes. As far as he's concerned, that's more than enough. He doesn't want any increase.

As Jones sees it, the schools are doing a pretty good job. True, his daughter's third grade has 33 students in it and his son has to go to school from eight in the morning until two in the afternoon, but these are fairly minor inconveniences. They can live with them for another year. The status quo is good enough.

Suppose Jones and his neighbors vote to maintain their school taxes at exactly the 1959-60 level. Will the schools be as good? Probably not. First, the likelihood is that there will be more students, so the Jones girl may have 35 children in her class, rather than 33. "But," Mr. Jones may figure, "the fourth

# the rising cost of education

grade teacher is very good. Two extra pupils shouldn't phase her."

But when his daughter comes home from her first day of school, Mr. Jones may find that the old fourth grade teacher is no longer there. She *was* a good teacher. That's why she attracted the attention of the superintendent in the suburban district at the other end of the state. He offered her a considerably higher salary than she was earning in District A, so she resigned her position. She might have stayed in District A—she liked her job and she enjoyed working with her former colleagues—but it didn't seem sensible to turn down the extra pay.

Jones will also find other changes taking place. District A is going to have to spend more for many of the other items it buys. It can't raise expenditures. Perhaps textbooks can be used for an extra year or building maintenance can be cut. The district may decide not to transport children who live less than two miles from the schools. In the past, buses carried all children who had to go farther than a mile. Now, Mr. Jones' children may have to walk.

### A slight rise

Let's suppose, though, that Mr. Jones and his neighbors grudgingly agree that if their schools stand still they will really be falling behind. Let's assume that the taxpayers realize that they must raise their taxes a little to maintain the status quo. Is this enough?

Well, it is, if they're satisfied with the schools as they have been.

For example, three years ago, the physics teacher was invited to attend a summer workshop in a new method of teaching his subject. The school board, fired by his enthusiasm when he returned, agreed to appropriate some money to implement an improved program. It asked him to wait until next year.

Each year since then, he has been asking the district to spend some extra money to turn an old classroom into a laboratory. But, so long as the district is only maintaining the status quo, it can't afford to make the needed changes. By this time his enthusiasm has begun to run a little thin. He's even thinking seriously of getting out of teaching (or the district) because he doesn't have the equipment to do his job.

And he's not the only one who wants to improve upon the status quo. The superintendent saw a language laboratory in operation at one of the conventions he attends each year. He'd like to see one installed in his district.

The high school principal has been having problems scheduling his classes. Machine methods could ease his chore considerably and give him more time in which to work with his teachers.

The head of the custodial force is aware that three schools need painting badly. If they're not painted soon, he says, major repair work will be necessary.

These men want to *improve* their schools. Improvements take money. How can the schools show Jones that he must dig deeper?

### Using the CEI

This is what the Cost of Education Index is designed to do. It emphasizes the most powerful weapon available to schoolmen—comparison. It permits you to show how much money districts throughout the nation are spending for administration, instruction, debt service and capital outlay, maintenance, operation, transportation, fixed charges and other services.

Then it presents these costs by *regions* and by *district size*. (*To learn your region and district size, see page 82.*) Moreover, it presents expenditures for the *median* districts, the top 25% of the districts and the top 10% in each category.

(The median—or 50th percentile—is the amount spent by the school district that is right in the middle for its particular category. If your district is spending exactly at the national median level, this means that 50% of the other districts in the United States are spending more than yours, 50% less.)

But this is only a start. To help you explain the costs of education to your public, statistics are presented on the adequacy of your staff (how many students does a teacher have to handle?) and the salaries being paid.

To find out how to use this data, please turn to the next page.

# How to use the Cost

**The Cost of Education Index was designed to be used by all schoolmen, not just experts in educational finance. Here, for the layman (and the expert), is a guide that will help you understand the information presented.**

## WHAT IS THE COST OF EDUCATION INDEX?

■ ■ ■ For years, the federal government has issued a monthly Consumer Price Index. This Index tells how consumer prices are rising or falling and helps to explain why a basket of groceries costs more today at a supermarket than it did a month or a year ago.

The Cost of Education Index is an attempt to provide similar information to schoolmen. It is designed to help you explain to your public and to yourselves, how much teacher salaries have risen; where your school tax dollars are going; why maintenance and operation costs have increased or decreased.

But the Cost of Education Index is more than a massive accumulation of facts and figures. It is designed to be a dynamic and purposeful tool in the hands of local school boards and local administrators.

Here is what it will help you to do at the local level:

**1.** Compare your district's overall costs with those of others in your region.

**2.** Compare your expenditures for specific items such as transportation, teachers' salaries, administrative costs, food service, etc., with other districts of your own size in your own locality.

**3.** Discover the areas in which you appear to be over-extending or under-expending and help you uncover the reasons why.

Finally, with a little ingenuity and interpolation, it will give you a rough yardstick of how much you might want to spend in terms of the wealth of your own district, to provide your community with a quality educational program.

To provide all this information in a form most usable to you, three kinds of cost figures are presented in this issue of SCHOOL MANAGEMENT. First are the national figures. These are followed by figures for nine regions, and finally seven breakdowns of district sizes. To make all districts in the nation comparable, a common denominator called "expenditure pupil units," based on the number of students in your district, has been used.

Figures are presented for "Average," "Quality Quarter" and "Top Tenth" districts.

**Average,** or "median," means that half the districts are spending more than this figure, half less.

The figure given for **Quality Quarter** indicates that one-quarter of the districts are spending above this amount, three-quarters below it. The **Top Tenth** figure is the amount *above which* 10% of the districts are spending.

On this and the following pages, you can find out in what region your district is located, what size category it is in, and how to compute your own district's cost of educating its pupils. It is important that you read these pages before you proceed to other articles in this magazine. The Cost of Education Index is designed, basically, to help you make valid comparisons. This article will give you the tools you need.

# st of Education Index

## HOW DO WE FIND OUR REGION?

For purposes of this study, the nation is divided into nine regions. These particular regions are arbitrary but are chosen to conform with those used by the federal government. To find your region, see the map, right, for the section in which your state appears.

**REGION 1:** Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

**REGION 2:** New York, New Jersey, Pennsylvania.

**REGION 3:** Ohio, Indiana, Illinois, Michigan, Wisconsin.

**REGION 4:** Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

**REGION 5:** Delaware, Maryland, Dist. of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

**REGION 6:** Kentucky, Tennessee, Alabama, Mississippi.

**REGION 7:** Arkansas, Louisiana, Oklahoma, Texas.

**REGION 8:** Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada.

**REGION 9:** Washington, Oregon, California, Alaska.

## WHAT IS OUR DISTRICT SIZE?

For purposes of this study, the school districts of the United States are divided by size into seven groups. These groups are based upon actual enrollment figures of the districts involved. The size groupings are as follows:

Size 1—More than 25,000 students
Size 2—12,001 to 25,000 students
Size 3—6,001 to 12,000 students
Size 4—3,001 to 6,000 students
Size 5—1,201 to 3,000 students
Size 6—601 to 1,200 students
Size 7—300 to 600 students

*(Note: Because about 94% of the public school students of the United States are in districts with 300 or more students, this bottom limit is put on the survey. Districts with fewer than 300 students can generally count themselves in Size 7.)*

**PLEASE TURN PAGE**

## HOW MANY STUDENTS DO WE HAVE?

*(Expenditure Pupil Units)*

In computing school district expenditures, "Expenditure Pupil Units" (EPU's) are used, rather than the actual number of pupils. Expenditure Pupil Units take into account the fact that it costs more to educate a high school student than it does to educate an elementary school student. By using this measure, it is possible for any district in the United States to compare itself with any other.

To find your district's Expenditure Pupil Units, multiply the Average Daily Attendance of your high school students by 1.3 and add this figure to the elementary ADA.

Elementary ADA includes those grades which are normally classified as elementary by state and local practice. Any span of grades from K-8 (such as K-6, 1-8) may be considered elementary. Students explicitly taught in junior high schools, however, must be considered as secondary school pupils, no matter what their grade designation.

Because it costs more per pupil to operate a very small school than it does to operate a large one, a "sparsity" correction is used to take this into account. This correction was developed by Dr. Paul R. Mark of Teacher's College, Columbia University.

If your district has fewer than 316 elementary school students and/or fewer than 695 secondary school students, you must apply these correction factors.

**If your district's elementary ADA is less than 316 and between:**

1 and 22, use the figure 22.

23 and 44, use your actual ADA

45 and 109, multiply your ADA by 1.56 and subtract 25.

110 and 315, multiply your ADA by .82 and add 57.

**If your district's secondary ADA is less than 695 and between:**

1 and 68, multiply your ADA by 1.68 and add 14.

69 and 391, multiply your ADA by 1.02 and add 59.

392 and 695, multiply your ADA by .78 and add 153.

If you sparsity corrected your secondary student population, you must multiply the *corrected* figure by 1.3 and add it to the elementary ADA (or sparsity corrected elementary ADA, as the case may be) to obtain your expenditure pupil units.

**Note:** If your district uses Average Daily Membership figures, rather than ADA, these may be substituted for ADA. But for precise cost comparisons, ADA should be used.

## HOW DO WE FIND OUR STAFFING PUPIL UNITS?

Staffing Pupil Units (SPU's) are based on the fact that it takes more staff members to work with students on the secondary level than it does on the elementary level. These units are used in figuring the staffing adequacy of your district. Staffing Pupil Units are obtained by multiplying your secondary ADA by 1.1 and adding that figure to the elementary ADA.

If your elementary ADA is less than 316 and/or your secondary ADA is less than 695, you must apply sparsity corrections. These are the same corrections used *(above)* in figuring your district's Expenditure Pupil Units.

## HOW DO WE FIND OUR ABILITY PUPIL UNITS?

In estimating the wealth behind each student in your district, a different measure is used. This measure is called Ability Pupil Units (APU's). To get your district's APU's, you must first obtain a figure for Resident Average Daily Attendance.

Resident Average Daily Attendance incorporates all students attending your schools and residing in your district added to all students who reside in your district but go to public schools outside your district *to which your district* pays tuition. RADA does *not* include students

attending your schools but residing in another district, nor does it include private or parochial school students.

When you have Resident Average Daily Attendance figures for your district, multiply the secondary RADA by 1.3 and add that figure to the elementary RADA. If your elementary RADA is less than 316 and/or your secondary RADA is less than 695, the same sparsity corrections used to obtain EPU's must be applied.

**Note.** Some districts do not keep separate attendance figures for resident and non-resident students. If that is the case, you can estimate your RADA. To do this, get a ratio between actual students in your district and Average Daily Attendance. Multiply your resident students by this ratio. The resulting figure is a good estimate of your RADA. For example, if there are 1,000 students registered in your schools and your ADA is 900, the ratio of ADA to registered students is 90% or .90. If there are 1,200 resident students in your district, multiply 1,200 by .90. The result (1,080) will serve as a good estimate of your Resident Average Daily Attendance.

## WHAT MEMBERS OF OUR STAFF SHOULD WE INCLUDE UNDER ADMINISTRATION?

Administration in this report refers to the central administration of the district, not to the administration of individual schools. The superintendent, any assistant superintendents, administrative assistants and business managers should be listed under professional personnel. In effect, this includes any professional members of the central administrative staff. In most cases they will be certificated, although the business official may not be. Clerks and secretaries under administration include the people working directly for the central administration.

## WHAT MEMBERS OF OUR STAFF SHOULD WE INCLUDE UNDER INSTRUCTION?

The instructional staff (in addition to classroom teachers) includes all building principals, assistant principals, supervisors of instruction, guidance, library and psychological personnel and audio-visual and television specialists. Instructional clerks and secretaries include those persons who work on the individual school staffs for the principal, teachers and other instructional personnel.

## WHAT SHOULD WE INCLUDE UNDER ATTENDANCE SERVICES?

Attendance services include those activities which have as their primary purpose the promotion and improvement of children's attendance in school. Salaries for attendance personnel and secretarial and clerical assistance should be included in this category. So, too, should the cost of any supplies required to carry out attendance services.

## WHAT SHOULD WE INCLUDE UNDER HEALTH SERVICES?

Health services are activities in the field of physical and mental health *which are not direct instruction.* Medical, dental, psychiatric and nursing services would be included. Periodic checkups are a part of the health services of the school, but health education classes are not.



*PLEASE TURN TO PAGE 177*

# The National Cost of Education Index—1960-61

**School districts are spending more in 1960-61 to educate a single child than ever before in their history. But how much of the additional dollars must be attributed to inflation and how much to educational betterment? Here is an answer.**

■ ■ ■ The Cost of Education Index shows how educational costs have risen. In 1959, the median district in the United States spent $276 per student on net current expenditures. In 1960 this figure rose almost 6% to $292. The 1960-61 school year finds the median district spending $304 per student, an increase of about 4% over the previous year.

But how much of this rise was just to keep up with inflation and how much went for educational betterment?

Computations based on the use of more than two dozen cost and price indexes over which schoolmen have no control, indicate that there has been an inflationary increase in school costs of 8.4% over the same two-year period. We call this the Index of Educational Inflation.

### Cost of inflation

Let's see what this means. From 1959 to 1960, the cost of education rose 5.9%. But the Index of Educational Inflation rose 4.2%. As a result, a school had to spend $288 in 1960 to buy the services and goods that cost $276 in 1959. This much of the increase was directly attributable to inflation.

Thus, although the median district in the United States increased its spending by $16 per EPU in that year, only $4 went towards improving the schools.

How about the last year? School spending, in the median districts, rose 4.1%. But the Index of Educational Inflation rose 4%. In other words, what schools were buying for $292 in 1960, cost $304 in 1961. Almost none of the extra money raised by schools went to educational improvement.

To provide the same program in 1961 that cost $276 in 1959, these schools would have had to be spending $299. They were spending $304. The increase was not great, but at least over the two years these districts were doing something to improve their schools.

### Are You Beating Inflation? ►

*The charts on the opposite page show the expenditure level for the nation, the nine regions and the seven district sizes for the three years of this study. Figures given are the Net Current Expenditures for the lowest 10% of the nation's schools, the lowest 25%, the median, the Quality Quarter and the Top Tenth.*

*In the far right column is an index, showing how much each category has increased (or decreased) its expenditures over the base year 1958-59. (All categories start at 100.0.) In 1959-60, any category failing to attain an index number of 104.2 or more (in color), lost out to inflation. In 1960-61, any category that failed to attain an index rating of 108.4 or more (in color), lost out to inflation over the two-year period.*

### The lowest districts

How well did other districts make out? According to the CEI statistics, the lowest 10% of

# NET CURRENT EXPENDITURES PER PUPIL

## 1958-59

| | 10% | 25% | 50% | 75% | 90% |
|---|---|---|---|---|---|
| Nat'l | $175 | $219 | $276 | $331 | $387 |
| **Region** | | | | | |
| 1 | 182 | 228 | 301 | 323 | 353 |
| 2 | 237 | 286 | 348 | 422 | 541 |
| 3 | 212 | 243 | 277 | 338 | 367 |
| 4 | 205 | 231 | 268 | 302 | 339 |
| 5 | 156 | 167 | 194 | 237 | 310 |
| 6 | 127 | 142 | 160 | 186 | 215 |
| 7 | 139 | 187 | 210 | 240 | 283 |
| 8 | 210 | 241 | 278 | 308 | 387 |
| 9 | 276 | 302 | 318 | 350 | 383 |
| **Size** | | | | | |
| 1 | 176 | 223 | 273 | 335 | 365 |
| 2 | 175 | 221 | 286 | 335 | 376 |
| 3 | 171 | 228 | 303 | 347 | 374 |
| 4 | 167 | 228 | 295 | 346 | 416 |
| 5 | 176 | 226 | 274 | 317 | 398 |
| 6 | 179 | 210 | 250 | 305 | 379 |
| 7 | 173 | 212 | 255 | 298 | 361 |

## INDEX OF EDUCATIONAL INFLATION = 100.0

## 1959-60

| | 10% | 25% | 50% | 75% | 90% |
|---|---|---|---|---|---|
| Nat'l | $185 | $231 | $292 | $349 | $418 |
| **Region** | | | | | |
| 1 | 191 | 243 | 301 | 346 | 377 |
| 2 | 259 | 301 | 381 | 466 | 550 |
| 3 | 228 | 252 | 298 | 348 | 391 |
| 4 | 215 | 251 | 280 | 315 | 360 |
| 5 | 151 | 177 | 201 | 243 | 362 |
| 6 | 136 | 158 | 176 | 203 | 229 |
| 7 | 144 | 206 | 220 | 258 | 296 |
| 8 | 218 | 263 | 310 | 348 | 422 |
| 9 | 295 | 318 | 336 | 369 | 422 |
| **Size** | | | | | |
| 1 | 194 | 225 | 293 | 356 | 393 |
| 2 | 184 | 231 | 306 | 358 | 405 |
| 3 | 179 | 242 | 323 | 361 | 394 |
| 4 | 174 | 241 | 309 | 360 | 437 |
| 5 | 182 | 240 | 288 | 347 | 421 |
| 6 | 173 | 228 | 260 | 295 | 319 |
| 7 | 194 | 218 | 268 | 314 | 377 |

## INDEX OF EDUCATIONAL INFLATION = 104.2

| | 10% | 25% | 50% | 75% | 90% |
|---|---|---|---|---|---|
| Nat'l | 105.7 | 105.5 | 105.9 | 105.4 | 108.0 |
| **Region** | | | | | |
| 1 | 104.9 | 106.6 | 100.0 | 107.1 | 106.8 |
| 2 | 109.2 | 105.2 | 109.5 | 110.4 | 101.7 |
| 3 | 107.5 | 103.7 | 107.6 | 103.0 | 106.5 |
| 4 | 104.9 | 108.7 | 104.5 | 104.3 | 106.2 |
| 5 | 96.8 | 106.0 | 103.6 | 102.5 | 116.8 |
| 6 | 107.1 | 111.3 | 110.0 | 109.1 | 106.5 |
| 7 | 103.6 | 110.2 | 104.8 | 107.5 | 104.6 |
| 8 | 103.8 | 109.1 | 111.5 | 113.0 | 109.0 |
| 9 | 106.9 | 105.3 | 105.7 | 105.4 | 110.2 |
| **Size** | | | | | |
| 1 | 110.2 | 100.9 | 107.3 | 106.3 | 107.7 |
| 2 | 105.1 | 104.5 | 107.0 | 106.9 | 107.7 |
| 3 | 104.7 | 106.1 | 106.6 | 104.0 | 105.3 |
| 4 | 104.2 | 105.7 | 104.7 | 104.0 | 105.0 |
| 5 | 103.4 | 106.2 | 105.1 | 109.5 | 105.8 |
| 6 | 96.6 | 108.6 | 104.0 | 96.7 | 84.2 |
| 7 | 112.1 | 102.8 | 105.1 | 105.4 | 104.4 |

## 1960-61

| | 10% | 25% | 50% | 75% | 90% |
|---|---|---|---|---|---|
| Nat'l | $187 | $239 | $304 | $370 | $440 |
| **Region** | | | | | |
| 1 | 208 | 249 | 317 | 365 | 419 |
| 2 | 276 | 355 | 423 | 481 | 553 |
| 3 | 247 | 281 | 324 | 392 | 458 |
| 4 | 232 | 260 | 296 | 350 | 406 |
| 5 | 167 | 184 | 209 | 260 | 325 |
| 6 | 137 | 156 | 180 | 205 | 239 |
| 7 | 161 | 212 | 239 | 277 | 320 |
| 8 | 253 | 281 | 330 | 367 | 418 |
| 9 | 291 | 325 | 353 | 389 | 441 |
| **Size** | | | | | |
| 1 | 233 | 267 | 337 | 381 | 406 |
| 2 | 213 | 247 | 324 | 393 | 465 |
| 3 | 177 | 256 | 335 | 379 | 446 |
| 4 | 175 | 240 | 312 | 379 | 479 |
| 5 | 178 | 230 | 292 | 356 | 424 |
| 6 | 195 | 223 | 284 | 359 | 419 |
| 7 | 199 | 243 | 292 | 359 | 439 |

## INDEX OF EDUCATIONAL INFLATION = 108.4

| | 10% | 25% | 50% | 75% | 90% |
|---|---|---|---|---|---|
| Nat'l | 106.9 | 109.5 | 110.1 | 111.8 | 113.7 |
| **Region** | | | | | |
| 1 | 114.3 | 109.2 | 105.3 | 113.0 | 118.7 |
| 2 | 116.5 | 124.1 | 121.6 | 114.0 | 102.2 |
| 3 | 116.5 | 115.6 | 117.0 | 116.0 | 124.8 |
| 4 | 113.2 | 112.6 | 110.4 | 115.9 | 119.8 |
| 5 | 107.1 | 110.2 | 107.7 | 109.7 | 104.8 |
| 6 | 107.9 | 109.9 | 112.5 | 110.2 | 111.2 |
| 7 | 115.8 | 113.4 | 113.8 | 115.4 | 113.1 |
| 8 | 120.5 | 116.6 | 118.7 | 119.2 | 108.1 |
| 9 | 105.4 | 107.6 | 111.0 | 111.1 | 115.1 |
| **Size** | | | | | |
| 1 | 132.4 | 119.7 | 123.4 | 113.7 | 111.2 |
| 2 | 112.7 | 111.8 | 113.3 | 117.3 | 123.7 |
| 3 | 103.5 | 112.3 | 110.6 | 109.2 | 119.3 |
| 4 | 104.8 | 105.3 | 105.8 | 109.5 | 115.1 |
| 5 | 101.1 | 101.8 | 106.6 | 112.3 | 106.5 |
| 6 | 108.9 | 106.2 | 113.6 | 117.7 | 110.6 |
| 7 | 115.0 | 114.6 | 114.5 | 120.5 | 121.6 |

# The Education

the school districts in the United States *failed to keep up with inflation.* In 1959, these districts were spending no more than $175 per pupil. To keep up with inflation, they would have to spend $190 per pupil this year, but the CEI study shows that 10% of the schools are now spending $187 or less. Thus, in the districts that were already doing the least for education, the amount of money available for education has actually decreased in the last two years.

The bottom quarter of the districts in the United States did manage to keep ahead of inflation over the two-year period, but just barely. Their expenditures went from $219 per pupil to $239. Applying the Index of Educational Inflation (8.4%), we find that these districts had to spend $237 this year just to maintain the level of education they were providing two years ago.

**The highest districts**

If your district had been in the Quality Quarter in 1959 (spending $331 or more per pupil), chances are that it not only offset inflation, it also added a little money to improve the schools.

**The Quality Quarter**

The Quality Quarter districts raised their expenditures from $331 per pupil to at least $370 in 1961. Of this amount, $28 went to offset the effects of the Index of Educational Inflation. As a result, these districts have about $11 per pupil to spend for improving the level of education offered two years ago.

Among the Top Ten districts in the United States, the picture is mixed. These districts, already spending more than $387 per pupil in 1959, increased their expenditure to $431 in 1960 and $440 in 1961.

Applying the Index of Educational Inflation, the Top Tenth districts had to increase their expenditures in 1960 to $403 per pupil. Thus $28 extra per pupil was provided last year to improve the schools.

**Losing out**

But in 1961, these districts provided only $9 more per pupil for their schools. In order to maintain the improved program they had offered the previous year, they would have had to spend an extra $17. Thus these Top Tenth districts actually backslid during the past year. (It should be noted, however, that over a two-year period, these districts are spending $20 more per pupil than they would have had to spend to keep up with inflation. Although they failed to move ahead this particular year,

Budget Categories

**ADMINISTRATION**
Professional salaries
Clerks and secretaries
Other expenditures

**INSTRUCTION**
Professional salaries
Classroom teachers
Other professionals
Clerks and secretaries
Teaching materials
Other expenditures

**ATTENDANCE**

**HEALTH**
Professional salaries
Other expenditures

**OPERATION**
Custodial salaries
Heat
Utilities other than heat
Other expenditures

**MAINTENANCE**
Custodial salaries
Other expenditures

**FIXED CHARGES**
Retirement funds
Other expenditures

**OTHER SERVICES**

**NET CURRENT EXPENDITURES**

**Transportation**
Salaries
Other expenditures
**Total Current Expenditures**

# Picture • 1959 • 1960 • 1961

| Average Cost Per Pupil | | | % of Net Current Expenditures | | |
|---|---|---|---|---|---|
| 1959 | 1960 | 1961 | 1959 | 1960 | 1961 |
| **$11.81** | **$12.20** | **$12.70** | **4.3%** | **4.2%** | **4.2%** |
| 6.34 | 6.41 | 6.30 | 2.3 | 2.2 | 2.1 |
| 3.46 | 3.66 | 4.10 | 1.3 | 1.3 | 1.3 |
| 2.01 | 2.13 | 2.30 | .7 | .7 | .8 |
| **214.66** | **226.74** | **233.60** | **77.8** | **77.6** | **76.9** |
| 198.65 | 210.31 | 217.50 | 72.0 | 72.0 | 71.6 |
| 181.80 | 192.22 | 198.80 | 65.9 | 65.8 | 65.4 |
| 16.85 | 18.09 | 18.70 | 6.1 | 6.2 | 6.2 |
| 2.88 | 3.36 | 3.50 | 1.0 | 1.1 | 1.2 |
| 7.66 | 8.19 | 8.80 | 2.8 | 2.8 | 2.9 |
| 5.47 | 4.88 | 3.80 | 2.0 | 1.7 | 1.2 |
| **.28** | **.31** | **.30** | **.1** | **.1** | **.1** |
| **1.73** | **1.83** | **1.80** | **.6** | **.6** | **.6** |
| 1.15 | 1.22 | 1.30 | .4 | .4 | .4 |
| .58 | .61 | .50 | .2 | .2 | .2 |
| **27.94** | **29.78** | **32.10** | **10.1** | **10.2** | **10.5** |
| 15.26 | 16.00 | 17.00 | 5.5 | 5.5 | 5.6 |
| 4.90 | 4.88 | 5.45 | 1.8 | 1.7 | 1.8 |
| 5.18 | 5.19 | 5.85 | 1.9 | 1.8 | 1.9 |
| 2.60 | 3.71 | 3.80 | .9 | 1.2 | 1.2 |
| **9.79** | **10.67** | **11.60** | **3.5** | **3.7** | **3.8** |
| 2.88 | 3.05 | 3.40 | 1.0 | 1.0 | 1.1 |
| 6.91 | 7.62 | 8.20 | 2.5 | 2.7 | 2.7 |
| **8.93** | **9.76** | **10.90** | **3.2** | **3.3** | **3.6** |
| ——— | ——— | 6.70 | — | — | 2.2 |
| ——— | ——— | 4.20 | — | — | 1.4 |
| **.76** | **.90** | **.80** | **.4** | **.3** | **.3** |
| **275.90** | **292.19** | **303.80** | **100** | **100** | **100** |
| **12.10** | **12.81** | **13.40** | **4.4** | **4.4** | **4.4** |
| 3.74 | 3.97 | 4.20 | 1.4 | 1.4 | 1.4 |
| 8.36 | 8.84 | 9.20 | 3.0 | 3.0 | 3.0 |
| **288.00** | **305.00** | **317.20** | — | — | — |

over the span of years covered by this study, they have continued in their role of pace setters for the nation.)

Looking at this on a national basis, while interesting, is not completely fair. Different regions of the nation, and different district sizes, are more, or less, able to provide funds for education. (*See page 91 for a method of weighing your district's* effort *in behalf of its schools.*)

### Region two is high

As the table (*see page 87*) shows, average (or median) districts in Region 2 spend well above the national average on education. As a matter of fact, almost half of the districts in Region 2 fall into the Top 10% of the nation.

From 1959 (the base year for this study) to 1961, these districts increased their expenditures $75, a rise of 22%. So in Region 2, more than 50% of the districts not only provided the 8.4% to keep up with inflation, they moved well ahead of it.

Region 8 (with an increase of 18.7%), Region 3 (17.1%), Region 7 (13.8%), Region 6 (12.5%), Region 9 (11.0%), and Region 4 (10.4%), also kept up with, and exceeded, the costs of inflation.

At the other end of the scale, districts in Region 1 failed to increase their expenditures enough to keep up with inflation. Over the two years, median districts in this region increased their spending only 5.3% rather than the 8.4% needed.

They were not the only ones to fail to keep up with spiraling outside costs. Median districts in Region 5 (7.7%) also lost out to inflation.

Looking at the size of districts, we find that among the average districts in the United States, the bigger ones not only spent more per pupil than their smaller cousins, they increased their expenditures faster. They increased their spending 23.4% over the two-year period, a huge gain on inflation.

On the average, the middle size groups (3, 4 and 5), which upped their expenditures by 10.1%, 5.8% and 1.1% respectively, did the least to offset inflation.

Looking at overall expenditures on a regional and district size basis still does not give a complete understanding of how a school district's money is spent and where it is—and where it is not—keeping up with inflation.

### The national picture

On the preceding two pages, a national box score is presented for a median district in the United States. It shows what it was spending for Net Current Expenditures during each of the last three years and also how much was spent on each of 28 separate items in the budget. Also shown is the percentage of Net Current Expenditures that each item represents.

In articles following this one (*starting on page 96*) each of these areas is explored more fully. At this point, however, it is most important to understand two things.

### Is "average" good?

First, in general, to be "average" is nothing to be inordinately happy about. The Cost of Education Index figures are not designed to show what schools should be doing but what they are doing. If you agree with most leaders in education that not enough is being done, then a district with "average" expenditures must reexamine its thinking and decide whether it wants to retain its mediocre position or would rather push ahead with the Quality Quarter and Top Tenth schools.

There is another problem to consider. In looking over this chart, and others on later pages, you may discover that your district, while it ranks only as average for Net Current Expenditures, actually has very high expenditures in other areas.

If this is so, you had better know the reason why.

### Balancing expenditures

Balanced expenditures are very important to a sound school program. It is rather obvious that a district that spends only 50% of its current funds for instruction has unbalanced expenditures. The average district in the United States spends almost 70% in this one area. Certainly expenditures so far below that level must be a cause for concern.

But is it equally obvious that a district that spends 90% of its funds for instruction is also heading for trouble?

Certainly, on the surface, it may look good. "We're spending all our money for teaching the children," you may say. But are you providing your teachers with enough administrative leadership? Are the buildings well heated and well lighted? Are they being maintained properly? Are you neglecting other auxiliary services that contribute a great deal to the welfare of students and to the quality of your schools?

All of these are factors that must be taken into consideration in evaluating the quality of your own schools. The Cost of Education Index is simply a tool. Used properly, it can help you to raise the level of your district's educational program.

Starting on the next page are articles designed to help you put it to use.

# How to evaluate your district's financial effort

**It is unreasonable to expect a poor district to raise as much money for education as a rich one. But it is not unreasonable to ask all districts to expend the same "effort." Here's how to measure your district's effort for education.**

■ ■ ■ There is a difference between a district's "expenditures" for education and its financial "effort." A district that is spending more to educate its students may not be making the same financial effort as a district that is spending much less.

Effort, then, is a measure of a district's ability and willingness to pay.

How can a district's financial effort be measured? One rough method is to compare the district's per capita personal income with the amount that is being spent per pupil on net current expenditures.

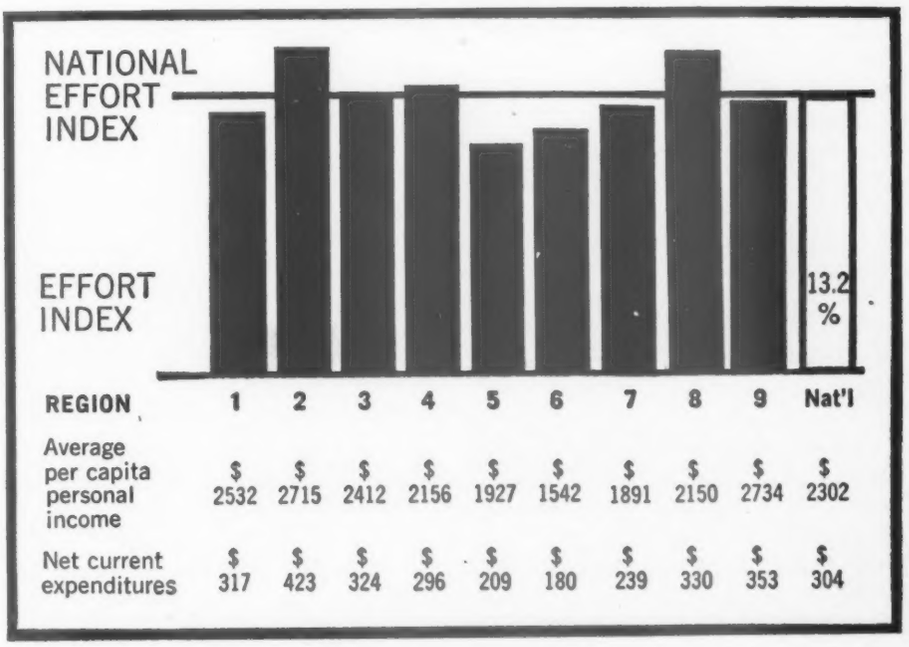
For example, per capita personal income nationally, according to government statistics, is $2,302 per person (*see chart at right*). The national average net current expenditure per pupil (EPU) is $304. We can make an index out of these figures, by dividing the net current expenditures by the per capita personal income. The resultant figure (13.2%) is the effort that the nation as a whole is making for education.

Looking at the chart, we see that Regions 2 and 9 have considerably more income per capita than do Regions 5, 6 and 7. The other four regions are clustered pretty close together in the middle.

It is reasonable to assume that school districts in Regions 2 and 9 are assigning more dollars per student to education—they have more to spend. But are they making as great an *effort* to support their schools?

Region 2 is spending, on the average, $423 per student on education. Its effort index (15.5%) indicates that districts in this area not only *have* more money than most, they are willing to spend a larger portion of what they have for education. Only Region 8 comes anywhere near Region 2 in the proportion of income it is spending for education.

Region 9, with all its great resources, is spending $353 per stu-




| REGION | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Nat'l |
|---|---|---|---|---|---|---|---|---|---|---|
| Average per capita personal income | $ 2532 | $ 2715 | $ 2412 | $ 2156 | $ 1927 | $ 1542 | $ 1891 | $ 2150 | $ 2734 | $ 2302 |
| Net current expenditures | $ 317 | $ 423 | $ 324 | $ 296 | $ 209 | $ 180 | $ 239 | $ 330 | $ 353 | $ 304 |

dent for education. Its *effort* (12.9%) puts it below the average national effort. In other words, despite their relatively high income, the voters in Region 9 are unwilling to make an extra effort for education.

### Little effort

How about Regions 5, 6 and 7? The answer is not encouraging. Certainly the amount available to support the schools is lower than in other regions, but, in addition, the voters in those areas of our nation appear unwilling to make even an average effort to provide income for education.

For example, if Region 5 made the same financial effort as Region 2 (15.5%), its average net current expenditures per pupil would rise from $209 to $299. In Region 6, an effort equal to Region 2's, would produce $239, per EPU, rather than $180, and in Region 7 it would produce $293, rather than $239.

So, while the amount available for schools in these regions is obviously low, it is also much too apparent that lack of effort, more than lack of money, is holding them back.

### Dollar goes further

Of course, one might argue that a dollar goes further in Mississippi (in Region 6) than it does in New York (Region 2). This is true to an extent, and does cut down somewhat on the gap in expenditures between the two regions, but it hardly accounts for it all.

Admittedly, building costs due to lower site acquisition and labor costs are usually less in low expenditure-per-pupil regions than in high ones. But, in some instances, building materials might be even higher. This is particularly true if the building materials were fabricated in high cost regions and shipped to low cost areas.

We can show that the educational salary dollar will go further in Mississippi than in New York. It costs Mississippi less than New York to "purchase" a teacher of like professional abilities. But we can also show that low expenditure states *do not hold onto well-trained persons* as long as the high expenditure states do. The difference in salary results in substantial differences in *standards of living* between regions. This is because teachers who are paid less in Mississippi than in New York must, in many instances, actually pay more for television sets, automobiles, furniture and household appliances, and just as much for many foods, life insurance, social security, and health plans.

### Rough measure

At best, this particular method of measuring financial effort is a rough one. In the first place, the federal government does not publish per capita personal income figures on a school district basis. The problems to be overcome are just too much for available resources. However, *Sales Management* magazine publishes annual *county* per capita personal income estimates. These are available in almost every good business library or, perhaps, through the sales department of a large corporation in your town. This data should enable you to come in closer on ability and tax effort comparisons for your district.

But, even with this more exact information, only a rough index of effort can be drawn from it. This is so because most local school revenue is based on property taxes, rather than on taxation of income.

Another measure of a district's financial effort for education is the relationship between its net current expenditures per pupil and its true property valuation.

Even here, there are pitfalls. Most districts do not levy taxes against the full property valuation within their areas. Instead, taxes are levied against *assessed* valuations. The relationship between this "taxable valuation" and real valuation varies widely from district to district.

For example, let's examine three separate districts. Each has true property valuation of $1 million. In other words, if someone wanted to buy all the property in any one district, he could purchase it for $1 million.

But District A *assesses* property at 20% of true valuation. District B assesses at 50% and District C at 100%. That means that District A actually has just $200,000 of *taxable* property, District B has $500,000 of *taxable* property and District C, $1 million of *taxable* property.

### Different tax base

So here we have three districts with identical true value. But each is raising money against a different tax base. Clearly, assessed—or taxable—valuation is not a good indicator of a district's ability to pay.

(This disparity can be further compounded. Let's assume that District A assessed its property 10 years ago, while District C assesses its property every two years. Since the value of property has continued to increase over the last decade, District A has assessed at 20% of 1950's value, which is probably no more than 15% of today's market value. District C, since it reassesses every two years, probably is taxing at pretty close to true market value.)

### Ability pupil units

Because districts pay both for students who attend their own schools and for those they send to public schools in other districts, a new unit of measurement must be used as a common denominator to compare the amount of valuation each district has behind its students. This measure is called Ability Pupil Units (APU). It includes all students for whom the district pays, but excludes students coming into the district for whom the district is paid. (*To learn how to compute your district's Ability Pupil Units, see page 84.*)

As the chart show (*see opposite page*), the median district in the United States has $6,558 in *taxable* valuation behind each student (APU) but it has $18,766 in true valuation. In other words, in the median district in the United States, the schools can tax only 35% of the district's real wealth.

In Region 1, the median district has $9,520 in taxable valuation behind each student, and $16,832 in true valuation. In this region, the

schools can tax 57% of the true wealth. In Region 9, the median district (with true valuation of $21,963 and taxable valuation of just $5,800) can only tax 26% of the true wealth.

In practical terms, this means that a taxpayer in Region 9, given a bill for $50 tax on every $1,000 of assessed valuation, is really only paying $50 for almost $4,000 of true valuation. In Region 1, a taxpayer with a bill for $50 on every $1,000 of assessed valuation, is really paying that amount on less than $2,000 of true valuation. So, given the same tax rate, the taxpayer in Region 1 is actually paying more than twice as much on his property as the taxpayer in Region 9.

It is obvious from this that a true measure of the "wealth" of a district cannot be based upon assessed, or taxable, valuation. This measure is important basically because it tells how much money a school district *can* get at, rather than telling how much it *should* be able to get at.

Looking at true, or full, valuation per Ability Pupil Unit, we find that one quarter of the districts in the nation as a whole, have at least $26,878 available per pupil, while one-tenth have $47,198 or more. On the other end of the scale, it should be noted that 10% of the districts reported they had $6,684, or less, in total valuation behind each student.

Surprisingly, the median districts in Region 3 have more true value behind their pupils than the median districts in any other region. Regions 9, 8 and 7 follow in that order, with Regions 5 and 6 bringing up the rear.

In the Quality Quarter and Top Tenth, Region 8 shows greater wealth per pupil than any other, while Regions 5 and 6 remain in the rear. Surprisingly, Region 2, usually up with the leaders, falls close to the mid-point throughout.

It is apparent from these figures that for districts in Regions 5 and 6 to raise as much money for education as those in District 8, they must expend a far greater effort. For example, if a median district in Region 6 taxed at the rate of $1 for every $100 of true valuation, it would raise $139.92 locally. A median district in Region 8, with the same tax rate, would be able to raise $213.12.

How does district size affect district wealth? In the median and Quality Quarter categories, the larger sizes have greater wealth behind their students. But the better-off smaller districts, those falling into the Top Tenth of their size group, reverse this trend. So we see that a median Size 1 district has $23,376 behind each student, while a median Size 7 district has $16,084. But in the Top Tenth, the largest districts have $49,362 behind each student, while the smallest have better than $60,000 with which to support each student.

### Where the money comes from

School districts raise most of their local money on the basis of property taxes. As the chart shows (*see*

## HOW MUCH ASSESSED VALUATION HAVE WE IN OUR DISTRICT?

To get this figure for your district, divide the total assessed valuation of all property in your district by your ability pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation ►** | **$ 6,558** | **$10,859** | **$17,824** |
| REGION | | | |
| 1 | 9,520 | 15,586 | 21,322 |
| 2 | 6,209 | 9,478 | 13,856 |
| 3 | 8,722 | 17,438 | 24,281 |
| 4 | 5,950 | 8,469 | 11,484 |
| 5 | 4,983 | 9,324 | 12,431 |
| 6 | 4,008 | 6,925 | 9,767 |
| 7 | 6,927 | 11,575 | 15,898 |
| 8 | 5,826 | 9,205 | 18,593 |
| 9 | 5,800 | 10,143 | 19,720 |
| DISTRICT SIZE | | | |
| 1 | 10,313 | 16,997 | 20,746 |
| 2 | 8,052 | 12,396 | 16,484 |
| 3 | 6,783 | 11,487 | 15,850 |
| 4 | 6,697 | 11,276 | 17,438 |
| 5 | 5,653 | 8,951 | 16,534 |
| 6 | 5,973 | 9,569 | 14,755 |
| 7 | 6,241 | 10,501 | 23,130 |

## HOW MUCH TRUE VALUATION HAVE WE IN OUR DISTRICT?

To get this figure for your district, estimate the true market value of all property in your district and divide by your ability pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation ►** | **$18,766** | **$26,878** | **$47,198** |
| REGION | | | |
| 1 | 16,832 | 24,691 | 35,398 |
| 2 | 19,062 | 25,443 | 33,881 |
| 3 | 23,758 | 35,732 | 49,376 |
| 4 | 17,546 | 24,878 | 40,462 |
| 5 | 13,569 | 20,061 | 24,551 |
| 6 | 13,992 | 19,662 | 26,748 |
| 7 | 20,003 | 31,290 | 53,559 |
| 8 | 21,312 | 38,493 | 100,010 |
| 9 | 21,963 | 33,333 | 60,070 |
| DISTRICT SIZE | | | |
| 1 | 23,376 | 35,732 | 49,362 |
| 2 | 21,252 | 26,960 | 43,613 |
| 3 | 19,829 | 27,994 | 37,800 |
| 4 | 20,014 | 26,481 | 41,129 |
| 5 | 18,601 | 30,438 | 57,845 |
| 6 | 17,825 | 31,055 | 63,767 |
| 7 | 16,084 | 32,934 | 60,683 |

*page 95*), the median district this year raised $179.28 per student (EPU) locally. Almost as much ($133.20) was contributed by the states (*see tabulations, page 95*). Another small amount was contributed by the Federal government. (These figures add up to more than $304 because they are income for all school costs, not just net current expenditures.)

As can be seen from these charts, the state contribution per pupil varied greatly from region to region, and, somewhat, according to district size. (The largest districts have been asked to carry a greater part of their burden alone.) For example, in Region 1, the individual districts are expected to carry almost 80% of the financial load, while in Region 6, the local districts only contribute about 40% of their own income.

State income comes from many different sources, but seldom from taxes on real property. Sales taxes, income taxes on cigarettes, liquor and luxuries, are some of the sources of state revenue. Horse and dog tracks make another important contribution.

Now it can be seen that while the relationship between true property valuations and net current expenditures does provide a fairly good effort index, it, too, falls short of what might be desired.

### How to measure your effort

When we talk about a district's financial "effort," what we are really discussing is the district's ability and willingness to tax itself for education. Obviously, all of a school district's income comes from the taxpayers. But when a man places a bet on a horse, he does not consciously say "I am taxing myself for education," even though a part of what he will inevitably lose does go to the schools in the form of state aid.

But when a man votes to raise his tax levy for the schools, or approves a school budget, he is definitely making a decision to spend a certain amount for the schools of his district. This is the *effort* he is consciously willing to make for the schools.

We have already established that true valuation per Ability Pupil Unit is the best measure of the wealth each district has behind its students. The amount that a district raises in taxes on property provides the school income from local sources.

Now we have two elements that, when put together, can give us a true effort index. Each district (to have most meaning this must be done on a district basis, not on regional medians) has a set amount of true wealth behind its students. From that true wealth, each district raises a certain number of dollars per student. The relationship between these figures gives a true effort index.

For example, let's say District A has $5,000 in true valuation behind each student (APU) and it raises $500 per student (EPU) locally. The effort index for District A is 10%. Now, obviously a district with just $1,000 in true property valuation behind each student cannot raise as much as District A for education. But if it expends as much *effort*, it will raise $100 per student locally. And if it raises more than that, its effort is greater than that of District A, even though it is not providing as much money per student for education.

As can be seen by the chart (*see bottom right on opposite page*), no region in the United States is coming anywhere near making 10% effort for its schools. On a national basis, the median district is expending a .92% effort for education. One quarter of the schools makes an effort of 1.48% and the Top Tenth expends 2.20% of their true property valuation for the schools.

Region 1, with a median effort of 1.67%, far exceeds the national average, as does Region 2 (1.45%). Among the Quality Quarter districts, Region 4 moves up to the top of the effort scale.

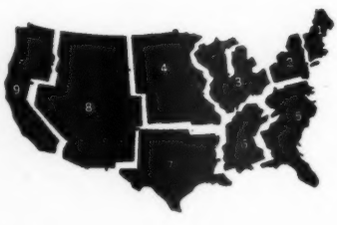
Region 9, with a median effort index of only .57%, is among the lowest in the nation, despite the fact that the median districts in this region have more money with which to work. It is evident that in this comparatively wealthy area of the nation, most voters are content to go along with a minimum effort to provide their schools with money.

Regions 5, 6 and 7 present another picture. Here, because of low income and property values, if taxpayers expended an average effort (.92%) they would still be giving their schools less than the national average income with which to work. To put their schools on a par with districts in other regions of the nation, these taxpayers would have to far exceed average national effort.

Unfortunately, the great majority of districts in these three regions are failing to do even an average job. Districts in these three regions cannot afford as much money for education as those in most of the rest of the nation. But if their taxpayers value education as highly as do those in the rest of the nation, they can make the same *effort* to support their schools. Apparently they have chosen not to do so.

Of course, there are other circumstances to take into account. It is far easier for a man earning $10,000 a year to give up 10% of his income than it is for a man earning $3,000 a year to give up 5% of his. Nevertheless, so long as the major responsibility for supporting schools is left in the hands of local and state governing bodies, it is going to be necessary for all districts to make at least an average effort, if they are to bring their schools up to par.

**WHERE IS OUR DISTRICT LOCATED?**




**WHAT IS OUR DISTRICT SIZE?**

1—Over 25,000 pupils
2—12,001 to 25,000
3—6,001 to 12,000
4—3,001 to 6,000
5—1,201 to 3,000
6—601 to 1,200
7—300 to 600

## HOW MUCH INCOME ARE WE RAISING FOR OUR DISTRICT LOCALLY?

To get this figure for your district, add all school receipts from local taxation and divide the total by your expenditure pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation ►** | **$179.28** | **$289.40** | **$383.11** |
| REGION | | | |
| 1 | 276.90 | 353.78 | 472.82 |
| 2 | 250.72 | 377.90 | 486.29 |
| 3 | 251.59 | 340.78 | 471.15 |
| 4 | 243.22 | 317.72 | 374.13 |
| 5 | 82.23 | 127.75 | 186.56 |
| 6 | 74.43 | 112.98 | 158.89 |
| 7 | 120.88 | 179.17 | 274.27 |
| 8 | 184.03 | 250.37 | 351.45 |
| 9 | 156.10 | 267.29 | 342.10 |
| DISTRICT SIZE | | | |
| 1 | 181.28 | 199.86 | 303.93 |
| 2 | 199.54 | 318.78 | 391.71 |
| 3 | 199.90 | 312.95 | 396.87 |
| 4 | 188.64 | 310.41 | 406.35 |
| 5 | 161.12 | 270.22 | 349.46 |
| 6 | 147.77 | 242.35 | 352.96 |
| 7 | 190.87 | 295.27 | 400.30 |

## HOW MUCH INCOME COMES TO OUR DISTRICT FROM THE STATE?

To get this figure for your district, add all school receipts from state sources and divide the total by your expenditure pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation ►** | **$133.20** | **$184.88** | **$250.36** |
| REGION | | | |
| 1 | 69.51 | 96.33 | 139.37 |
| 2 | 204.93 | 297.60 | 372.29 |
| 3 | 110.92 | 155.56 | 188.40 |
| 4 | 91.32 | 140.86 | 194.42 |
| 5 | 143.30 | 179.82 | 233.98 |
| 6 | 127.18 | 147.04 | 178.24 |
| 7 | 147.80 | 167.63 | 194.64 |
| 8 | 148.21 | 197.28 | 257.48 |
| 9 | 172.86 | 245.43 | 272.73 |
| DISTRICT SIZE | | | |
| 1 | 112.14 | 159.50 | 194.64 |
| 2 | 127.91 | 156.77 | 220.40 |
| 3 | 131.74 | 186.00 | 258.02 |
| 4 | 143.82 | 186.53 | 253.78 |
| 5 | 136.33 | 176.78 | 251.29 |
| 6 | 144.75 | 195.06 | 281.11 |
| 7 | 117.99 | 190.92 | 244.49 |

## HOW MUCH INCOME COMES TO OUR DISTRICT FROM THE NATION?

To get this figure, total all receipts, other than those for food subsidies, from the federal government and divide by your EPU's.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation ►** | **$ 3.08** | **$ 7.50** | **$ 17.45** |
| REGION | | | |
| 1 | 3.15 | 6.95 | 10.81 |
| 2 | .97 | 3.52 | 7.20 |
| 3 | 1.12 | 4.30 | 7.46 |
| 4 | 3.65 | 6.14 | 10.10 |
| 5 | 5.19 | 10.56 | 22.63 |
| 6 | 4.37 | 8.42 | 13.79 |
| 7 | 1.29 | 5.20 | 14.91 |
| 8 | 5.16 | 13.98 | 31.92 |
| 9 | 7.16 | 14.86 | 31.25 |
| DISTRICT SIZE | | | |
| 1 | 4.94 | 10.49 | 24.47 |
| 2 | 3.32 | 9.35 | 24.27 |
| 3 | 2.33 | 7.39 | 17.45 |
| 4 | 2.22 | 6.83 | 13.98 |
| 5 | 3.08 | 7.50 | 15.32 |
| 6 | 3.30 | 7.64 | 18.02 |
| 7 | 2.80 | 7.46 | 16.26 |

## WHAT EFFORT IS OUR DISTRICT MAKING FOR EDUCATION?

To get this figure for your district, divide local income per expenditure pupil unit by true valuation per ability pupil unit.

| | Average | Quarter Quality | Tenth Top |
|---|---|---|---|
| **Nation ►** | **.92%** | **1.48%** | **2.20%** |
| REGION | | | |
| 1 | 1.67 | 2.33 | 7.71 |
| 2 | 1.45 | 1.72 | 2.03 |
| 3 | .95 | 1.45 | 1.88 |
| 4 | 1.18 | 2.97 | 3.39 |
| 5 | .64 | .99 | 1.39 |
| 6 | .55 | .80 | 1.55 |
| 7 | .58 | .77 | .98 |
| 8 | .73 | 1.17 | 1.76 |
| 9 | .57 | 1.05 | 1.54 |
| DISTRICT SIZE | | | |
| 1 | .75 | 1.08 | 1.61 |
| 2 | .94 | 1.43 | 2.01 |
| 3 | .93 | 1.37 | 1.89 |
| 4 | .98 | 1.49 | 1.89 |
| 5 | .90 | 1.47 | 2.09 |
| 6 | .81 | 1.39 | 2.21 |
| 7 | 1.11 | 1.70 | 2.77 |

# How much should you spend on administration and instruction?

**In most school districts, administration and instruction account for more than 80% of net current expenditures. Here is a look at school spending patterns for professional personnel, clerks and secretaries and instructional materials.**

■ ■ ■ Expenditures for administration have risen 7.5% in the last two years. In 1959, the median school in the nation was spending $11.81 per student for administration. Today the median school is spending $12.70 for administrative services.

How much of this increase actually went toward improving the schools, and how much simply went to pay off inflation? As the chart (*see below*) shows, the index of administrative expenditures rose 3.3% from 1959 to 1960. During that same period, the cost of inflation forced a rise of 2.4%. So, of the 3.3% rise in administrative spending in one year, only .9% (or just a dime per student) actually went towards improvement of school administrative services.

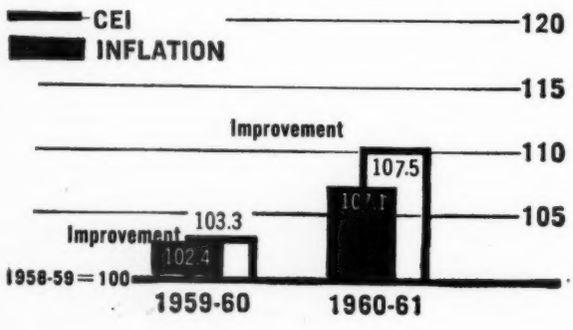
During the current year, administrative expenditures rose to an index level of 107.5 and inflation to 107.1. As a result, over the two-year period, less than a nickel of the extra 89 cents per student being spent on administration, actually went towards improving the services schools were offering.

### Instruction vs. inflation

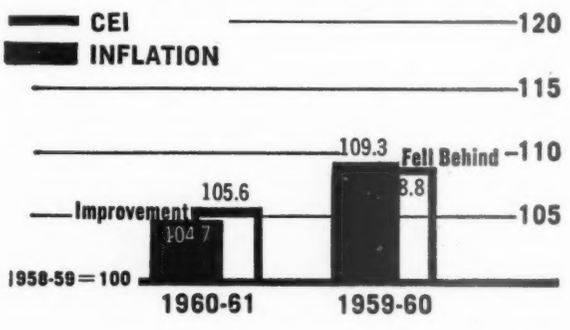
How about instructional services? Did they fare any better? Median expenditures for instruction increased from $214.66 in 1959 to $226.74 in 1960, a rise of 5.6%. But inflation accounted for 4.7% of this increase. Thus, in the median district, of the extra $12 per student spent on instruction, just a little better than $1 went for educational improvement.

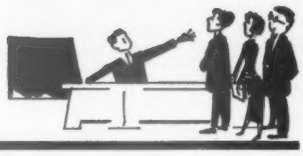
Over the two-year period, the picture is even less encouraging. While inflation reached an index number of 109.3, expenditures for instruction rose only to 108.8. In other words,

**ADMINISTRATION vs. INFLATION**




**INSTRUCTION vs. INFLATION**





## How much are we spending for administration?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$12.70** | **$17.36** | **$24.18** |
| HIGH REGION | 2 16.51 | 2 20.99 | 3 30.90 |
| LOW REGION | 5 5.81 | 5 8.35 | 6 12.81 |
| HIGH SIZE | 7 20.09 | 7 26.16 | 7 34.05 |
| LOW SIZE | 1 7.64 | 1 9.88 | 1 11.87 |

## How much are we spending for instruction?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$233.60** | **$277.17** | **$319.34** |
| HIGH REGION | 2 287.76 | 2 336.34 | 2 368.08 |
| LOW REGION | 6 148.78 | 6 171.03 | 6 202.33 |
| HIGH SIZE | 1 254.22 | 3 295.35 | 3 333.87 |
| LOW SIZE | 7 209.80 | 7 250.53 | 4 288.61 |

## How much are we spending for classroom teachers' salaries?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$198.80** | **$229.23** | **$264.11** |
| HIGH REGION | 2 245.35 | 2 271.39 | 2 308.37 |
| LOW REGION | 6 129.04 | 6 146.61 | 6 171.46 |
| HIGH SIZE | 3 209.91 | 3 241.09 | 2 275.29 |
| LOW SIZE | 7 183.62 | 6 217.63 | 5 247.45 |

## How much are we spending for teaching materials?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$ 8.80** | **$12.16** | **$16.76** |
| HIGH REGION | 9 11.25 | 9 16.00 | 9 20.56 |
| LOW REGION | 6 3.61 | 6 5.16 | 6 7.92 |
| HIGH SIZE | 4 8.97 | 7 13.43 | 4 17.69 |
| LOW SIZE | 1/2 7.25 | 1 9.28 | 1 13.46 |

## ADMINISTRATION AND INSTRUCTION

### *How many professional administrators? (Per 1,000 students)*

| | Average | | Quality Quarter | | Top Tenth | |
|---|---|---|---|---|---|---|
| **National** | | **.65** | | **1.12** | | **1.90** |
| HIGH REGION | 7 | .84 | 7 | 1.40 | 7 | 2.17 |
| LOW REGION | 5 | .31 | 5 | .50 | 5 | .84 |
| HIGH SIZE | 7 | 1.73 | 7 | 2.19 | 7 | 3.17 |
| LOW SIZE | 1 | .24 | 1 | .29 | 1 | .43 |

### *How many classroom teachers? (Per 1,000 students)*

| | Average | | Quality Quarter | | Top Tenth | |
|---|---|---|---|---|---|---|
| **National** | | **40.00** | | **43.65** | | **47.34** |
| HIGH REGION | 2 | 43.80 | 2 | 46.96 | 2 | 51.52 |
| LOW REGION | 6 | 35.30 | 6 | 38.55 | 6 | 42.15 |
| HIGH SIZE | 7 | 41.02 | 7 | 45.55 | 7 | 52.37 |
| LOW SIZE | 1 | 38.72 | 1 | 40.83 | 1 | 43.02 |

### *How many other professional instructors? (Per 1,000 students)*

| | Average | | Quality Quarter | | Top Tenth | |
|---|---|---|---|---|---|---|
| **National** | | **2.69** | | **3.85** | | **5.08** |
| HIGH REGION | 1 | 3.05 | 1 | 4.42 | 1 | 6.30 |
| LOW REGION | 3 | 2.16 | 4 | 3.49 | 4 | 4.36 |
| HIGH SIZE | 3 | 3.21 | 4 | 4.36 | 3 | 5.75 |
| LOW SIZE | 7 | 1.55 | 7 | 2.75 | 7 | 4.00 |

### *How many clerks and secretaries? (Per 1,000 students)*

| | Average | | Quality Quarter | | Top Tenth | |
|---|---|---|---|---|---|---|
| **National** | | **2.62** | | **3.66** | | **4.67** |
| HIGH REGION | 9 | 3.63 | 2 | 4.44 | 9 | 5.59 |
| LOW REGION | 6 | 1.16 | 6 | 1.91 | 6 | 2.29 |
| HIGH SIZE | 1 | 3.51 | 3 | 4.22 | 3 | 5.13 |
| LOW SIZE | 7 | 2.08 | 6 | 3.15 | 6 | 3.90 |

expenditures for instruction actually lost out to inflation. The median district in the United States is spending less per pupil in real dollars for instruction today than it did two years ago.

### Four keys to quality

It is apparent that administration and instruction are the heart of any school program. Not only do they account for an overwhelming part of each district's expenditures, they also directly affect what is being taught and how the teaching is being done.

Four separate elements must be considered.

1. The instructional staff—in this case, basically classroom teachers—in terms of salary level and teaching load.
2. The administration, both central (the superintendent's staff) and building (the principal's staff) in terms of salary level and work load.
3. Teaching materials, including the amount available, their condition and how up-to-date they are.
4. Clerical and secretarial aid to both the administrative and instructional staffs.

These four elements provide the personnel, leadership, supplies and time necessary for good instruction and they must be considered as a package.

If expenditures in any one get out of line, they must of necessity affect the others. Thus, a district that squeezes all its money into salaries for classroom teachers, may find that it is giving them inadequate leadership or too few tools with which to work.

### How much for administration?

As the top chart on page 97 shows, the median district in the United States is spending $12.70 per pupil on administration in 1961. One quarter of the districts are spending at least $17.36 on this item, while the Top Tenth districts spend $24.18 or more per pupil for administration. Average schools spend 4.18% of their net current expenditures for administration, but some 10% of the nation's schools are spending at least $8.04 out of every $100 just to administer the program. (*For complete tables on expenditures for administration and instruction, see pages 102-105.*)

The Average and Quality Quarter schools in Region 2 are spending more per pupil on administration than districts in any other region, but 10% of the Region 3 districts top the entire list. Regions 5 and 6 share the lowest expenditures for administration.

On a size basis, it appears that the larger the school, the less it has to spend per pupil for administration. This becomes apparent when you consider that almost every district has a central administrator, no matter how few students there are under his wing. Since this man must be paid a reasonable salary, the amount is spread over fewer pupils than would be the case in a larger district. Few school systems would deliberately hire an administrator for every 300 students, but the smaller districts have no choice.

### Adequacy of administrators

This shows up even more obviously in considering the number of administrators districts have. The national average (*see top chart, page 98*) is .65 administrators per 1,000 students. The Quality Quarter districts go up to 1.12 and the Top Tenth schools have 1.9 administrators for every 1,000 pupils.

But the smallest districts have, *on the average,* 1.7 administrators for 1,000 students. One quarter of them have 2.19 and a tenth have 3.17 administrators for every 1,000 students. Even though this number of administrators may be desirable, it is doubtful if this is a freely made decision of the districts involved.

On a regional basis, the average district in Region 7 has the most administrators per pupil, while the Region 5 districts have the fewest. As can be seen, the pattern remains the same for the Quality Quarter and Top Tenth.

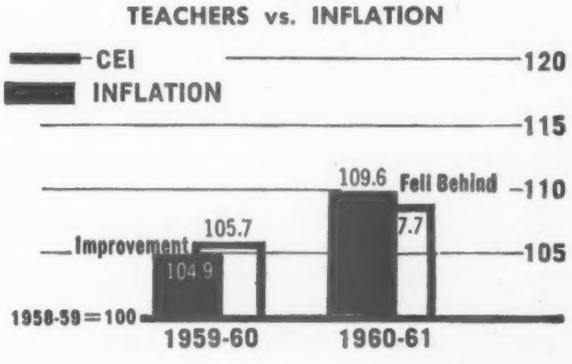
### Administrative pay

The median district in the nation (*see page 101*) is paying its administrators an average salary of $9,440 per year, a sizeable increase over the $8,600 being paid a year ago. However, because districts reported fewer administrators for every 1,000 students (staffing pupil units) this year, the amount of money being spent on administrative staffing did not rise sharply. As a matter of fact, it has steadily declined during the last three years from 2.3% of net current expenditures to 2.1% during the current year.

In the Quality Quarter and Top Tenth districts, there was little, if any, increase in salaries being paid to administrators. Apparently these districts felt that they could hold onto the men they wanted at present salary levels.

### Instructional costs

According to the second chart on page 97, the median district in the United States spends $233.60 for instruction. As was stated earlier,



this represents a failure to keep up with the costs of inflation.

Expenditures for instruction among the median schools varies from the $149 per pupil being spent in Region 6 to almost $288 expended in Region 2. Among the size groups, the range is much smaller.

The major part of instructional costs goes to pay the salaries of classroom teachers. The median district (*see chart 3, page 97*) is spending almost $199 per pupil on this item alone. This represents more than 65% of the net current budget.

Once again, however, to really understand your district's position on instructional staffing, you must examine the number of teachers you have (adequacy) and their salary level.

As the chart on page 98 shows, the median district in the nation has 40 classroom teachers for every 1,000 students (staffing pupils units). Again the range from region to region is great, but it is safe to say that any district that is staffed below this ratio had better examine its instructional program carefully because it is almost certainly under-staffed.

### Classroom salaries

How about salary levels? According to the CEI figures (*see page 101*), the average salary for classroom teachers in the median district in the nation is $5,208. The Quality Quarter schools offer an extra $700 per teacher and the Top Tenth schools raise the ante by another $500. Of course in Region 6, a district paying at the national median level would be very attractive to teachers who wanted to remain in that area, while in Region 9, a district would have to be paying *above* the national Quality Quarter level to be just average.

How did classroom salaries do in the fight against inflation? As the chart on page 99 shows, teacher salaries rose 5.7% from 1959 to 1960, but inflation took 4.9% of that amount from every teacher. Instead of getting a salary increase of $277, the average teacher really took home an extra $39 during the last school year.

Are things any brighter now? No. On the contrary, while the index of inflation moved up to 109.6 during the current year, the index of teachers' salaries rose to only 107.7. In other words, teachers this year are actually taking home fewer real dollars than they were taking home two years ago.

### Other professional instructors

How about the direct help given to teachers? This year, for the first time, information was gathered on the adequacy and salary of professional instructional personnel, other than classroom teachers. Included in this category are principals, assistant principals, supervisors of instruction, librarians, audio-visual experts and all others who aid directly in the teaching process but who do not ordinarily work in a classroom.

As can be seen (*page 98*), the average district in the United States has 2.69 of these people for every 1,000 students. Ten percent of the districts value them so highly that they have assigned more than five persons for every 1,000 students.

The pay range offered these people varies widely, too. While the median districts offer $6,772 for instructional personnel other than classroom teachers, 10% of the nation's schools pay average salaries above $9,500 to people taking these positions.

### Instructional supplies

In this day of modern educational techniques, the best teacher in the world would be handicapped if she lacked teaching materials. An experiment described to a class is obviously less effective than one a class can do itself.

The median districts in the United States are spending $8.80 per pupil on teaching materials during this school year. The Quality Quarter districts allocate $12.16 to this area, while the Top Tenth districts are spending $16.76 or more. *(See page 97.)*

It is disturbing to note that Region 6, with the fewest, and most poorly paid, teachers, also ranks lowest in the amount of money spent to supply these teachers with instructional materials.

In terms of inflation, expenditures for teaching materials did very well. From 1959 to 1960, the median district increased its spending by 53 cents, to $8.19. This represented an increase of 6.5%, a good margin over the 3% claimed by inflation.

In the current year, spending for materials rose by another 61 cents, bringing the current index to 114.9. The Index of Educational Inflation went up to 105.4, meaning that of the $1.14 increase in spending for teaching materials, close to two-thirds went for educational betterment.

### Secretaries and clerks

The fourth major element in considering instructional and administrative costs is the use of clerical and secretarial aides.

In terms of adequacy, the median district in the United States has 2.62 clerks for every 1,000 students (*see page 98*). These clerks work under both administration and instruction.

In terms of salary (*see opposite page*), the clerks and secretaries in the median district in the United States can expect to earn an average salary of $2,925. If they are lucky enough to work in Top Tenth districts, their earning power increases to $4,178. **End**

## *How well are we paying professional administrators?*

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$ 9,440** | **$11,227** | **$13,390** |
| HIGH REGION | 9 10,780 | 9 12,991 | 2 15,000 |
| LOW REGION | 6 7,000 | 6 8,400 | 6 9,840 |
| HIGH SIZE | 1 11,185 | 2 13,473 | 1 14,681 |
| LOW SIZE | 7 7,700 | 7 8,700 | 7 10,145 |

## *How well are we paying classroom teachers?*

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$5,208** | **$5,913** | **$6,471** |
| HIGH REGION | 9 6,105 | 9 6,505 | 9 7,048 |
| LOW REGION | 6 3,823 | 6 4,235 | 6 4,598 |
| HIGH SIZE | 1 5,812 | 1 6,283 | 2 6,767 |
| LOW SIZE | 7 4,750 | 7 5,500 | 7 5,967 |

## *How well are we paying other professional instructional personnel?*

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$6,772** | **$8,090** | **$ 9,655** |
| HIGH REGION | 9 7,795 | 2 9,567 | 2 11,507 |
| LOW REGION | 6 5,250 | 6 6,000 | 6 6,772 |
| HIGH SIZE | 1 8,117 | 1 8,990 | 3 10,614 |
| LOW SIZE | 7 5,800 | 7 7,020 | 7 8,650 |

## *How well are we paying clerks & secretaries?*

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$2,925** | **$3,628** | **$4,178** |
| HIGH REGION | 9 3,596 | 9 4,200 | 9 4,650 |
| LOW REGION | 6 2,260 | 6 2,769 | 6 3,360 |
| HIGH SIZE | 1 3,501 | 1 3,955 | 3 4,366 |
| LOW SIZE | 7 2,650 | 7 3,300 | 6 3,933 |

# STATISTICAL DATA—ADMINISTRATION AND INSTRUCTION

## How much are we spending per EPU for administration?

To get this figure for your district, add all costs for central administration and divide the total by your Expenditure Pupil Units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$12.70** | **$17.36** | **$24.18** |
| **Region** | | | |
| 1 | 10.34 | 14.39 | 18.75 |
| 2 | 16.51 | 20.99 | 27.58 |
| 3 | 12.83 | 18.87 | 30.90 |
| 4 | 12.50 | 17.03 | 23.37 |
| 5 | 5.81 | 8.35 | 13.56 |
| 6 | 6.39 | 9.23 | 12.81 |
| 7 | 13.93 | 18.01 | 24.54 |
| 8 | 13.20 | 17.88 | 24.18 |
| 9 | 14.44 | 19.26 | 23.96 |
| **Size** | | | |
| 1 | 7.64 | 9.88 | 11.87 |
| 2 | 10.21 | 12.59 | 16.86 |
| 3 | 9.27 | 13.49 | 16.73 |
| 4 | 10.72 | 14.94 | 19.06 |
| 5 | 11.44 | 15.55 | 22.09 |
| 6 | 15.56 | 21.07 | 28.79 |
| 7 | 20.09 | 26.16 | 34.05 |

## How much are we spending for administrative clerks?

To get this figure for your district, add all the salaries paid for clerks and secretaries working for the central administration and divide by EPU's.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$ 4.10** | **$ 4.75** | **$ 7.23** |
| **Region** | | | |
| 1 | 3.38 | 4.58 | 5.88 |
| 2 | 4.44 | 6.11 | 8.74 |
| 3 | 3.71 | 5.21 | 7.62 |
| 4 | 3.37 | 4.36 | 6.60 |
| 5 | 1.77 | 2.49 | 3.92 |
| 6 | 1.41 | 2.20 | 3.43 |
| 7 | 2.68 | 4.63 | 6.44 |
| 8 | 3.63 | 5.08 | 7.04 |
| 9 | 4.34 | 7.01 | 8.68 |
| **Size** | | | |
| 1 | 3.23 | 4.78 | 6.67 |
| 2 | 2.98 | 5.17 | 6.45 |
| 3 | 3.54 | 5.17 | 6.15 |
| 4 | 3.09 | 4.53 | 6.14 |
| 5 | 2.99 | 4.07 | 5.81 |
| 6 | 3.33 | 4.82 | 7.23 |
| 7 | 4.14 | 6.39 | 8.21 |

## How much are we spending for classroom salaries?

To get this figure for your district, total all expenditures for classroom teachers' salaries and divide the result by your EPU's.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$199** | **$229** | **$264** |
| **Region** | | | |
| 1 | 205 | 237 | 275 |
| 2 | 245 | 271 | 308 |
| 3 | 209 | 245 | 268 |
| 4 | 183 | 214 | 248 |
| 5 | 147 | 180 | 212 |
| 6 | 129 | 147 | 171 |
| 7 | 169 | 192 | 221 |
| 8 | 203 | 227 | 255 |
| 9 | 211 | 225 | 262 |
| **Size** | | | |
| 1 | 203 | 228 | 250 |
| 2 | 201 | 239 | 275 |
| 3 | 210 | 241 | 264 |
| 4 | 201 | 239 | 271 |
| 5 | 184 | 224 | 247 |
| 6 | 185 | 218 | 254 |
| 7 | 184 | 218 | 269 |

## How much are we spending for professional administrators?

To get this figure, total all salaries paid for professional members of the central administrative staff and divide by Expenditure Pupil Units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$ 6.30** | **$ 9.46** | **$14.06** |
| **Region** | | | |
| 1 | 5.23 | 8.25 | 10.04 |
| 2 | 7.19 | 11.65 | 18.36 |
| 3 | 6.63 | 10.30 | 15.86 |
| 4 | 5.98 | 9.56 | 14.20 |
| 5 | 2.55 | 4.10 | 6.70 |
| 6 | 3.51 | 4.96 | 7.14 |
| 7 | 6.50 | 10.78 | 15.33 |
| 8 | 7.58 | 10.28 | 14.47 |
| 9 | 6.83 | 10.81 | 13.43 |
| **Size** | | | |
| 1 | 2.56 | 2.99 | 3.63 |
| 2 | 3.11 | 4.12 | 5.41 |
| 3 | 4.04 | 5.90 | 6.91 |
| 4 | 5.33 | 7.41 | 9.46 |
| 5 | 5.99 | 8.10 | 11.80 |
| 6 | 8.75 | 11.12 | 16.20 |
| 7 | 12.77 | 15.83 | 20.89 |

## How much are we spending for instructional services?

To get this figure for your district, total all expenditures for instruction and divide the result by your EPU's.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$234** | **$277** | **$319** |
| **Region** | | | |
| 1 | 256 | 287 | 315 |
| 2 | 288 | 336 | 368 |
| 3 | 242 | 296 | 328 |
| 4 | 224 | 255 | 300 |
| 5 | 170 | 214 | 261 |
| 6 | 149 | 171 | 202 |
| 7 | 192 | 225 | 254 |
| 8 | 244 | 273 | 307 |
| 9 | 263 | 287 | 331 |
| **Size** | | | |
| 1 | 254 | 289 | 307 |
| 2 | 245 | 294 | 331 |
| 3 | 252 | 295 | 334 |
| 4 | 254 | 277 | 289 |
| 5 | 218 | 272 | 316 |
| 6 | 212 | 256 | 302 |
| 7 | 210 | 251 | 300 |

## How much are we spending for principals, et al?

To get this figure for your district, total all salaries for professional instructional personnel other than classroom teachers and divide by your EPU's.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$18.70** | **$25.92** | **$35.49** |
| **Region** | | | |
| 1 | 19.92 | 31.05 | 43.34 |
| 2 | 20.24 | 30.95 | 37.96 |
| 3 | 16.34 | 25.18 | 34.43 |
| 4 | 16.79 | 22.91 | 28.40 |
| 5 | 16.19 | 21.58 | 26.91 |
| 6 | 12.76 | 19.16 | 23.22 |
| 7 | 14.47 | 21.45 | 29.19 |
| 8 | 20.11 | 25.80 | 34.87 |
| 9 | 25.25 | 31.46 | 39.26 |
| **Size** | | | |
| 1 | 23.22 | 30.66 | 36.03 |
| 2 | 21.74 | 28.83 | 36.38 |
| 3 | 23.09 | 31.61 | 39.26 |
| 4 | 21.18 | 29.43 | 39.02 |
| 5 | 15.84 | 25.42 | 34.19 |
| 6 | 13.15 | 19.81 | 26.12 |
| 7 | 9.22 | 16.41 | 25.07 |

**REGION 1:** Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

**REGION 2:** New York, New Jersey, Pennsylvania.

**REGION 3:** Ohio Indiana, Illinois, Michigan, Wisconsin.

**REGION 4:** Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

**REGION 5:** Delaware, Maryland, Dist. of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

**REGION 6:** Kentucky, Tennessee, Alabama, Mississippi.

**REGION 7:** Arkansas, Louisiana, Oklahoma, Texas.

**REGION 8:** Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada.

**REGION 9:** Washington, Oregon, California, Alaska.

# STATISTICAL DATA

## How much are we spending for instructional clerks?

To get this figure for your district, total all salaries for instructional clerks and secretaries and divide the result by your EPU's.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$ 3.50** | **$ 6.70** | **$10.16** |
| **Region** | | | |
| 1 | 3.63 | 6.56 | 8.64 |
| 2 | 5.92 | 8.97 | 11.96 |
| 3 | 4.39 | 7.62 | 10.30 |
| 4 | 2.97 | 5.23 | 7.71 |
| 5 | 1.97 | 3.90 | 5.82 |
| 6 | .85 | 2.18 | 4.20 |
| 7 | 1.67 | 4.13 | 5.94 |
| 8 | 3.62 | 5.67 | 7.97 |
| 9 | 7.97 | 11.68 | 14.44 |
| **Size** | | | |
| 1 | 7.52 | 9.87 | 12.24 |
| 2 | 5.74 | 8.86 | 11.86 |
| 3 | 5.78 | 8.52 | 12.70 |
| 4 | 4.31 | 7.51 | 10.20 |
| 5 | 2.95 | 5.09 | 8.11 |
| 6 | 2.16 | 4.23 | 6.81 |
| 7 | .00 | 3.71 | 6.24 |

## How many professional administrators have we?

To get this figure, divide your total staffing pupil units (SPU's) by 1,000 and divide your total number of professional administrators by the result.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **.65** | **1.12** | **1.90** |
| **Region** | | | |
| 1 | .60 | .81 | 1.21 |
| 2 | .76 | 1.27 | 2.05 |
| 3 | .66 | 1.34 | 1.97 |
| 4 | .70 | 1.25 | 1.95 |
| 5 | .31 | .50 | .84 |
| 6 | .48 | .89 | 1.27 |
| 7 | .84 | 1.40 | 2.17 |
| 8 | .81 | 1.36 | 2.03 |
| 9 | .69 | 1.14 | 1.80 |
| **Size** | | | |
| 1 | .24 | .29 | .43 |
| 2 | .30 | .39 | .59 |
| 3 | .40 | .55 | .70 |
| 4 | .58 | .75 | .98 |
| 5 | .66 | .97 | 1.30 |
| 6 | 1.04 | 1.36 | 2.40 |
| 7 | 1.73 | 2.19 | 3.17 |

## How many other professionals do we have in instruction?

To get this figure, multiply the total number of instructional professionals, other than classroom teachers, and divide by your SPU's.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **2.69** | **3.85** | **5.08** |
| **Region** | | | |
| 1 | 3.05 | 4.42 | 6.30 |
| 2 | 2.66 | 3.79 | 5.72 |
| 3 | 2.16 | 3.51 | 4.84 |
| 4 | 2.58 | 3.49 | 4.36 |
| 5 | 2.73 | 3.61 | 4.97 |
| 6 | 2.38 | 3.82 | 4.97 |
| 7 | 2.48 | 3.72 | 5.01 |
| 8 | 2.76 | 3.90 | 5.18 |
| 9 | 3.04 | 4.21 | 5.69 |
| **Size** | | | |
| 1 | 3.00 | 3.83 | 4.99 |
| 2 | 3.08 | 4.03 | 5.01 |
| 3 | 3.21 | 4.29 | 5.75 |
| 4 | 3.18 | 4.36 | 5.72 |
| 5 | 2.70 | 3.85 | 5.08 |
| 6 | 2.06 | 3.16 | 4.54 |
| 7 | 1.55 | 2.75 | 4.00 |

## How much are we spending for teaching supplies?

To get this figure for your district, add all costs for teaching supplies that are consumed in the learning process and divide the result by EPU's.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$ 8.80** | **$12.16** | **$16.76** |
| **Region** | | | |
| 1 | 8.41 | 12.38 | 17.35 |
| 2 | 10.21 | 13.60 | 17.66 |
| 3 | 8.62 | 12.54 | 16.42 |
| 4 | 10.92 | 14.81 | 19.19 |
| 5 | 4.12 | 6.42 | 10.69 |
| 6 | 3.61 | 5.16 | 7.92 |
| 7 | 5.30 | 7.49 | 9.57 |
| 8 | 8.36 | 12.64 | 16.90 |
| 9 | 11.25 | 16.00 | 20.56 |
| **Size** | | | |
| 1 | 7.25 | 9.28 | 13.46 |
| 2 | 7.25 | 11.49 | 16.13 |
| 3 | 7.92 | 12.04 | 15.56 |
| 4 | 8.97 | 12.83 | 17.69 |
| 5 | 7.65 | 11.62 | 15.99 |
| 6 | 7.96 | 12.95 | 17.40 |
| 7 | 8.06 | 13.43 | 16.89 |

## How many classroom teachers have we per 1,000 students?

To get this figure, divide your total SPU's by 1,000 and divide your total number of classroom teachers by the result.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **40.00** | **43.65** | **47.34** |
| **Region** | | | |
| 1 | 41.27 | 45.05 | 48.30 |
| 2 | 43.80 | 46.96 | 51.52 |
| 3 | 40.21 | 43.05 | 47.42 |
| 4 | 41.08 | 43.69 | 46.94 |
| 5 | 38.52 | 41.18 | 43.91 |
| 6 | 35.30 | 38.55 | 42.15 |
| 7 | 40.04 | 43.76 | 48.26 |
| 8 | 41.14 | 44.33 | 46.88 |
| 9 | 37.37 | 41.06 | 44.34 |
| **Size** | | | |
| 1 | 38.72 | 40.83 | 43.02 |
| 2 | 39.26 | 42.49 | 46.96 |
| 3 | 39.89 | 43.05 | 46.87 |
| 4 | 39.67 | 43.28 | 47.61 |
| 5 | 39.92 | 43.27 | 46.27 |
| 6 | 40.31 | 43.67 | 48.11 |
| 7 | 41.02 | 45.55 | 52.37 |

## How many secretaries and clerks do we have for 1,000 students?

To get this figure, total all secretaries and clerks for administration and instruction and multiply by 1,000. Divide the result by your SPU's.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **2.62** | **3.66** | **4.67** |
| **Region** | | | |
| 1 | 2.78 | 3.42 | 4.42 |
| 2 | 3.34 | 4.44 | 5.29 |
| 3 | 3.00 | 3.86 | 4.69 |
| 4 | 2.62 | 3.33 | 4.07 |
| 5 | 1.78 | 2.58 | 3.54 |
| 6 | 1.16 | 1.91 | 2.29 |
| 7 | 2.26 | 3.04 | 3.99 |
| 8 | 2.62 | 3.83 | 4.26 |
| 9 | 3.63 | 4.39 | 5.59 |
| **Size** | | | |
| 1 | 3.51 | 3.99 | 4.84 |
| 2 | 3.09 | 4.10 | 4.98 |
| 3 | 3.18 | 4.22 | 5.13 |
| 4 | 2.84 | 3.71 | 4.77 |
| 5 | 2.20 | 3.22 | 4.22 |
| 6 | 2.37 | 3.15 | 3.90 |
| 7 | 2.08 | 3.37 | 4.36 |

**WHAT IS OUR DISTRICT SIZE?**

1—Over 25,000
2—12,001-25,000
3—6,001-12,000
4—3,001-6,000
5—1,201-3,000
6—601-1,200
7—300-600

***For help in using these charts, see article starting on page 82.***

# STATISTICAL DATA—ADMINISTRATION AND INSTRUCTION

## What percentage of NCE goes for administration?

To get this figure for your district, divide the total expenditures for administration by your net current expenditures.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **4.18%** | **5.53%** | **8.04%** |
| **Region** | | | |
| 1 | 3.46 | 4.27 | 5.12 |
| 2 | 3.79 | 5.53 | 7.22 |
| 3 | 3.98 | 6.31 | 9.16 |
| 4 | 4.12 | 5.73 | 8.18 |
| 5 | 2.59 | 3.66 | 4.75 |
| 6 | 3.63 | 5.42 | 6.42 |
| 7 | 5.50 | 7.75 | 9.98 |
| 8 | 4.08 | 5.18 | 7.29 |
| 9 | 4.14 | 5.24 | 6.58 |
| **Size** | | | |
| 1 | 2.53 | 2.77 | 3.32 |
| 2 | 2.45 | 3.28 | 4.19 |
| 3 | 2.93 | 3.75 | 4.64 |
| 4 | 3.38 | 4.33 | 5.66 |
| 5 | 3.94 | 4.72 | 6.22 |
| 6 | 5.29 | 6.63 | 8.98 |
| 7 | 6.96 | 8.75 | 11.30 |

## What percentage of NCE goes for administrators' salaries?

To get this figure for your district, divide total expenditures for professional members of the administrative staff by net current expenditures.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **2.07%** | **3.04%** | **5.01%** |
| **Region** | | | |
| 1 | 1.70 | 2.35 | 3.02 |
| 2 | 1.76 | 3.03 | 4.50 |
| 3 | 2.02 | 3.40 | 5.55 |
| 4 | 1.93 | 3.09 | 5.30 |
| 5 | 1.15 | 1.96 | 2.69 |
| 6 | 1.93 | 2.84 | 4.23 |
| 7 | 2.71 | 4.47 | 6.88 |
| 8 | 2.15 | 3.02 | 4.96 |
| 9 | 2.15 | 3.04 | 4.05 |
| **Size** | | | |
| 1 | .76 | .94 | 1.11 |
| 2 | 1.01 | 1.25 | 1.55 |
| 3 | 1.20 | 1.62 | 2.03 |
| 4 | 1.68 | 2.14 | 2.69 |
| 5 | 2.07 | 2.63 | 3.39 |
| 6 | 3.02 | 3.80 | 5.30 |
| 7 | 4.21 | 5.81 | 7.31 |

## What percentage of NCE goes for teachers' salaries?

To get this figure for your district, divide all salaries for regular classroom teachers by net current expenditures.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **65.44%** | **68.19%** | **72.98%** |
| **Region** | | | |
| 1 | 64.98 | 68.02 | 71.80 |
| 2 | 59.34 | 62.88 | 66.60 |
| 3 | 63.52 | 66.71 | 69.60 |
| 4 | 61.86 | 65.10 | 67.40 |
| 5 | 70.10 | 73.99 | 77.47 |
| 6 | 70.71 | 75.89 | 81.24 |
| 7 | 69.03 | 72.68 | 76.55 |
| 8 | 63.30 | 66.20 | 68.94 |
| 9 | 60.54 | 62.95 | 65.45 |
| **Size** | | | |
| 1 | 62.72 | 65.30 | 69.93 |
| 2 | 62.76 | 66.41 | 70.94 |
| 3 | 65.50 | 69.75 | 73.59 |
| 4 | 64.75 | 69.34 | 74.29 |
| 5 | 64.42 | 68.75 | 74.42 |
| 6 | 64.90 | 67.90 | 72.99 |
| 7 | 63.29 | 67.54 | 72.64 |

## What percentage of NCE goes for instruction?

To get this figure for your district, divide your total expenditures for instruction by your net current expenditures.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **76.89%** | **80.02%** | **83.38%** |
| **Region** | | | |
| 1 | 78.83 | 80.51 | 82.34 |
| 2 | 70.46 | 74.64 | 77.22 |
| 3 | 74.25 | 77.90 | 79.68 |
| 4 | 74.20 | 77.13 | 78.83 |
| 5 | 82.33 | 84.28 | 85.95 |
| 6 | 81.74 | 85.95 | 87.73 |
| 7 | 79.82 | 82.42 | 84.28 |
| 8 | 75.64 | 77.75 | 79.67 |
| 9 | 74.60 | 76.84 | 78.51 |
| **Size** | | | |
| 1 | 76.85 | 79.68 | 82.76 |
| 2 | 77.90 | 80.56 | 83.73 |
| 3 | 78.34 | 82.20 | 85.79 |
| 4 | 78.25 | 81.44 | 84.93 |
| 5 | 76.77 | 80.13 | 84.44 |
| 6 | 75.18 | 78.43 | 81.32 |
| 7 | 72.03 | 76.57 | 79.42 |

## What percentage of NCE goes for clerks' salaries?

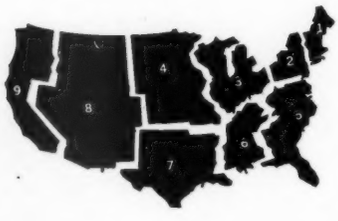
To get this figure, total all salaries for clerks and secretaries under instruction and administration and divide the result by net current expenditures.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **2.50%** | **3.14%** | **4.06%** |
| **Region** | | | |
| 1 | 2.25 | 2.88 | 3.46 |
| 2 | 2.55 | 3.13 | 3.77 |
| 3 | 2.62 | 3.34 | 3.96 |
| 4 | 2.15 | 2.72 | 3.39 |
| 5 | 1.90 | 2.43 | 3.31 |
| 6 | 1.58 | 2.16 | 2.72 |
| 7 | 2.24 | 2.94 | 3.99 |
| 8 | 2.19 | 3.12 | 3.77 |
| 9 | 3.48 | 4.94 | 6.16 |
| **Size** | | | |
| 1 | 3.45 | 4.16 | 4.52 |
| 2 | 2.72 | 3.79 | 5.38 |
| 3 | 2.67 | 3.58 | 4.84 |
| 4 | 2.16 | 3.10 | 3.96 |
| 5 | 2.11 | 2.73 | 3.48 |
| 6 | 2.07 | 2.78 | 3.30 |
| 7 | 1.99 | 2.85 | 3.95 |

## What percentage of NCE goes for other instructors?

To get this figure, total all salaries to professional instructional personnel other than classroom teachers and divide by net current expenditures.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **6.16%** | **8.09%** | **9.86%** |
| **Region** | | | |
| 1 | 6.83 | 8.91 | 11.04 |
| 2 | 4.94 | 6.75 | 8.21 |
| 3 | 5.06 | 6.42 | 8.35 |
| 4 | 5.50 | 6.95 | 8.21 |
| 5 | 7.03 | 9.17 | 11.70 |
| 6 | 6.37 | 8.94 | 11.18 |
| 7 | 6.01 | 8.19 | 9.77 |
| 8 | 6.00 | 8.22 | 9.64 |
| 9 | 7.11 | 8.79 | 10.38 |
| **Size** | | | |
| 1 | 7.16 | 8.54 | 10.38 |
| 2 | 7.32 | 8.77 | 10.23 |
| 3 | 7.45 | 8.91 | 10.47 |
| 4 | 6.75 | 8.57 | 10.93 |
| 5 | 6.03 | 8.01 | 10.34 |
| 6 | 4.74 | 6.53 | 8.41 |
| 7 | 3.33 | 5.57 | 7.88 |




**REGION 1:** Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

**REGION 2:** New York, New Jersey, Pennsylvania.

**REGION 3:** Ohio Indiana, Illinois, Michigan, Wisconsin.

**REGION 4:** Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

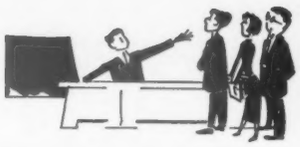
**REGION 5:** Delaware, Maryland, Dist. of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

**REGION 6:** Kentucky, Tennessee, Alabama, Mississippi.

**REGION 7:** Arkansas, Louisiana, Oklahoma, Texas.

**REGION 8:** Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada.

**REGION 9:** Washington, Oregon, California, Alaska.



# STATISTICAL DATA

## How well are we paying professional administrators?

To get this figure, total all salaries paid to professional administrators or full-time equivalents, and divide by the number of persons involved.

| Nation | Average $9,440 | Quality Quarter $11,227 | Top Tenth $13,390 |
|---|---|---|---|
| **Region** | | | |
| 1 | 9,520 | 11,063 | 13,000 |
| 2 | 10,500 | 12,800 | 15,000 |
| 3 | 10,000 | 11,950 | 13,540 |
| 4 | 9,000 | 10,800 | 12,500 |
| 5 | 9,000 | 10,331 | 12,380 |
| 6 | 7,000 | 8,400 | 9,840 |
| 7 | 8,659 | 10,129 | 11,776 |
| 8 | 9,250 | 10,500 | 11,628 |
| 9 | 10,780 | 12,991 | 14,537 |
| **Size** | | | |
| 1 | 11,185 | 13,427 | 14,681 |
| 2 | 11,033 | 13,473 | 14,582 |
| 3 | 10,331 | 12,500 | 14,409 |
| 4 | 10,000 | 12,000 | 14,166 |
| 5 | 9,300 | 10,800 | 12,000 |
| 6 | 8,964 | 10,100 | 11,500 |
| 7 | 7,700 | 8,700 | 10,145 |

## How well are we paying principals, et al?

To get this figure, total all salaries for professional instructional personnel other than classroom teachers and divide by the number of persons.

| Nation | Average $6,772 | Quality Quarter $8,090 | Top Tenth $9,655 |
|---|---|---|---|
| **Region** | | | |
| 1 | 6,666 | 8,000 | 9,571 |
| 2 | 7,783 | 9,567 | 11,507 |
| 3 | 7,372 | 8,635 | 9,322 |
| 4 | 6,514 | 7,789 | 9,057 |
| 5 | 6,000 | 7,024 | 8,583 |
| 6 | 5,250 | 6,000 | 6,772 |
| 7 | 6,000 | 7,039 | 8,564 |
| 8 | 6,998 | 7,786 | 8,734 |
| 9 | 7,795 | 9,104 | 10,154 |
| **Size** | | | |
| 1 | 8,117 | 8,990 | 9,794 |
| 2 | 7,477 | 8,717 | 9,874 |
| 3 | 7,492 | 8,832 | 10,614 |
| 4 | 6,362 | 7,711 | 10,154 |
| 5 | 6,675 | 7,882 | 9,310 |
| 6 | 6,250 | 7,616 | 9,000 |
| 7 | 5,800 | 7,020 | 8,650 |

## How well are we paying clerks and secretaries?

To get this figure, total salaries of all clerks and secretaries for administration and instruction and divide by the total number of persons.

| Nation | Average $2,925 | Quality Quarter $3,628 | Top Tenth $4,178 |
|---|---|---|---|
| **Region** | | | |
| 1 | 2,966 | 3,436 | 3,815 |
| 2 | 3,437 | 3,975 | 4,600 |
| 3 | 3,075 | 3,697 | 4,314 |
| 4 | 2,422 | 3,125 | 3,600 |
| 5 | 2,727 | 3,296 | 3,802 |
| 6 | 2,260 | 2,769 | 3,360 |
| 7 | 2,540 | 3,171 | 3,600 |
| 8 | 3,003 | 3,501 | 3,924 |
| 9 | 3,596 | 4,200 | 4,650 |
| **Size** | | | |
| 1 | 3,501 | 3,955 | 4,334 |
| 2 | 3,081 | 3,687 | 4,178 |
| 3 | 3,190 | 3,835 | 4,366 |
| 4 | 3,000 | 3,504 | 4,232 |
| 5 | 2,844 | 3,500 | 4,014 |
| 6 | 2,736 | 3,425 | 3,933 |
| 7 | 2,650 | 3,300 | 3,997 |

## How well are we paying classroom teachers?

To get this figure, total all salaries for classroom teachers and divide the result by the total number of teachers or full-time equivalents.

| Nation | Average $5,208 | Quality Quarter $5,913 | Top Tenth $6,471 |
|---|---|---|---|
| **Region** | | | |
| 1 | 5,236 | 5,804 | 6,271 |
| 2 | 6,009 | 6,362 | 6,845 |
| 3 | 5,014 | 6,191 | 6,614 |
| 4 | 4,881 | 5,488 | 6,175 |
| 5 | 4,055 | 4,694 | 5,536 |
| 6 | 3,823 | 4,235 | 4,598 |
| 7 | 4,471 | 4,947 | 5,227 |
| 8 | 5,256 | 5,656 | 6,015 |
| 9 | 6,105 | 6,505 | 7,048 |
| **Size** | | | |
| 1 | 5,812 | 6,283 | 6,467 |
| 2 | 5,488 | 6,228 | 6,767 |
| 3 | 5,645 | 6,231 | 6,711 |
| 4 | 5,375 | 6,080 | 6,618 |
| 5 | 5,009 | 5,696 | 6,318 |
| 6 | 4,997 | 5,536 | 6,068 |
| 7 | 4,750 | 5,500 | 5,967 |

## How well are we paying all instructional personnel?

To get this figure, total all salaries paid to instructional personnel, including classroom teachers, and divide by the number of persons.

| Nation | Average $5,289 | Quality Quarter $6,024 | Top Tenth $6,648 |
|---|---|---|---|
| **Region** | | | |
| 1 | 5,422 | 5,942 | 6,414 |
| 2 | 6,107 | 6,547 | 6,962 |
| 3 | 5,686 | 6,318 | 6,733 |
| 4 | 4,930 | 5,536 | 6,303 |
| 5 | 4,156 | 4,876 | 5,805 |
| 6 | 3,936 | 4,304 | 4,736 |
| 7 | 4,517 | 5,077 | 5,387 |
| 8 | 5,320 | 5,797 | 6,163 |
| 9 | 6,208 | 6,659 | 7,305 |
| **Size** | | | |
| 1 | 6,009 | 6,449 | 6,708 |
| 2 | 5,718 | 6,428 | 6,885 |
| 3 | 5,810 | 6,399 | 6,836 |
| 4 | 5,443 | 6,192 | 6,760 |
| 5 | 5,116 | 5,704 | 6,528 |
| 6 | 5,046 | 5,650 | 6,120 |
| 7 | 4,825 | 5,549 | 5,986 |

**Expenditure pupil units:** Multiply your secondary ADA by 1.3 and add the result to your elementary ADA. If your secondary enrollment is less than 695 or your elementary enrollment is less than 316, see correction factors on page 84.

**Staffing pupil units:** Multiply your secondary ADA by 1.1 and add the result to your elementary ADA. If your secondary enrollment is less than 695 or your elementary enrollment is less than 316, see correction factors on page 84.

**WHAT IS OUR DISTRICT SIZE?**

1—Over 25,000
2—12,001-25,000
3—6,001-12,000
4—3,001-6,000
5—1,201-3,000
6—601-1,200
7—300-600

***For help in using these charts, see article starting on page 82.***

# How much should you spend on debt service and capital outlay?

**In this article, the problems of debt service and capital outlay—and their effect upon current expenditures—are examined in detail. An effort is made to discover when a district's building burden begins to affect its ability to provide a quality educational program.**

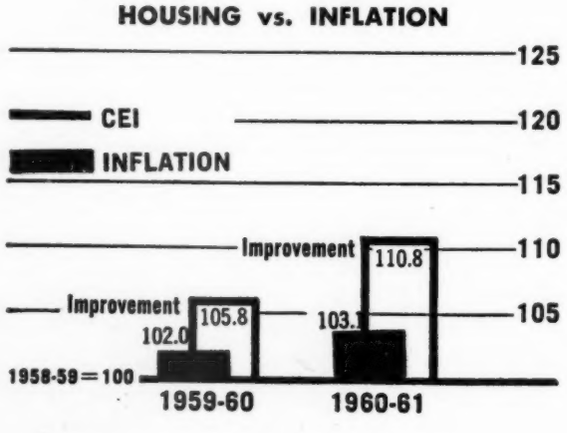
■ ■ ■ Expenditures for debt service and capital outlay (school housing) have risen faster than inflation during the past two years.

In 1959 (*see below*), the median district in the United States spent $41.40 per expenditure pupil unit on debt service and capital outlay. By 1960 this figure had risen 5.8% to $43.80. This year it stands at $45.87 per pupil, an increase of 10.8% over 1959, the base year for this study.

Inflation rose considerably more slowly. According to the Index of Educational Inflation, only 3.1% of the increase over the two-year period can be attributed to inflation.

### The importance of debt

Many people feel that debt is something prudent men avoid. But few taxpayers expect to lay down the full amount in cash when they purchase a house or a major piece of equipment, such as a washing machine. Instead they buy on installments.




Schools have the same problem. Few districts can raise $5 million in a single year to build a new high school. But spread over a period of years, it is feasible to raise this amount. So the district goes into debt.

Actually, studies made over the past several decades tend to show that there is a strong positive correlation between the amount of a district's debt and the quality of its schools. The reason for this is fairly obvious. Districts that have gone into debt have recognized the need for better schools and better equipment. They have gone into debt to insure that there will be no overcrowding, no use of outmoded, ill-equipped buildings.

### Point of no return

But this correlation can be carried too far. There is a point of no return where the district's debt becomes so large that it is too great a burden. Studies conducted by Dr. Paul Mort at Columbia University show that in *most* school districts, this point is reached when debt service and capital outlay payments reach or exceed 25% of the district's net current expenditures. At that point, Mort found, most districts begin siphoning funds from current expenditures in order to pay off their debt.

Here is how this would work in practice. If

## How much are we paying for capital outlay?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$ 9.39** | **$17.10** | **$32.48** |
| HIGH REGION | 8 14.88 | 8 25.57 | 3 49.82 |
| LOW REGION | 1 3.14 | 1 6.46 | 1 11.65 |
| HIGH SIZE | 6 9.50 | 6 20.28 | 1 44.01 |
| LOW SIZE | 5 5.91 | 5 14.39 | 5 26.52 |

## How much are we paying for total debt service?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$36.48** | **$56.00** | **$81.21** |
| HIGH REGION | 2 56.98 | 2 86.19 | 1 115.86 |
| LOW REGION | 6 12.94 | 6 25.11 | 6 38.95 |
| HIGH SIZE | 3 38.95 | 3 62.26 | 4 89.73 |
| LOW SIZE | 7 26.48 | 7 43.90 | 1 61.31 |

## How much interest are we paying on debt service?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$10.37** | **$18.64** | **$29.49** |
| HIGH REGION | 2 15.72 | 2 34.00 | 2 44.18 |
| LOW REGION | 6 1.45 | 6 5.61 | 6 8.54 |
| HIGH SIZE | 2 11.59 | 3 22.31 | 4 37.25 |
| LOW SIZE | 7 6.26 | 7 12.98 | 7 19.42 |

## What percentage above NCE goes for debt service and capital outlay?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **15.11%** | **21.88%** | **29.61%** |
| HIGH REGION | 3 19.80 | 3 24.43 | 3 33.18 |
| LOW REGION | 5 10.14 | 5 18.16 | 9 23.67 |
| HIGH SIZE | 3 16.78 | 4 23.18 | 6 32.82 |
| LOW SIZE | 7 13.73 | 7 19.93 | 1 24.24 |

# STATISTICAL DATA

## How much are we spending for capital outlay?

To get this figure for your district, total all expenditures for capital outlay and divide the result by your expenditure pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$ 9.39** | **$17.10** | **$32.48** |
| **Region** | | | |
| 1 | 3.14 | 6.46 | 11.65 |
| 2 | 8.39 | 15.60 | 25.72 |
| 3 | 11.46 | 23.10 | 49.82 |
| 4 | 13.62 | 21.57 | 35.82 |
| 5 | 5.73 | 14.09 | 30.11 |
| 6 | 6.92 | 12.90 | 20.69 |
| 7 | 5.31 | 10.57 | 20.97 |
| 8 | 14.88 | 25.57 | 39.98 |
| 9 | 10.32 | 18.86 | 36.24 |
| **Size** | | | |
| 1 | 8.88 | 17.90 | 44.01 |
| 2 | 9.16 | 17.07 | 42.22 |
| 3 | 8.50 | 15.69 | 39.52 |
| 4 | 9.05 | 18.62 | 30.86 |
| 5 | 5.91 | 14.39 | 26.52 |
| 6 | 9.50 | 20.28 | 35.81 |
| 7 | 8.99 | 16.35 | 34.00 |

## How much are we spending for debt service principal?

To get this figure for your district, total only the principal on your debt being paid off this year and divide the result by expenditure pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$22.93** | **$34.82** | **$51.34** |
| **Region** | | | |
| 1 | 29.02 | 50.00 | 83.67 |
| 2 | 34.06 | 50.05 | 63.74 |
| 3 | 26.73 | 41.01 | 59.35 |
| 4 | 20.43 | 28.38 | 35.23 |
| 5 | 8.32 | 17.66 | 33.68 |
| 6 | 5.52 | 10.61 | 23.15 |
| 7 | 17.28 | 25.99 | 39.46 |
| 8 | 24.09 | 39.71 | 55.15 |
| 9 | 17.45 | 32.30 | 45.66 |
| **Size** | | | |
| 1 | 21.24 | 33.43 | 44.44 |
| 2 | 21.27 | 33.68 | 50.58 |
| 3 | 12.26 | 40.75 | 55.06 |
| 4 | 23.15 | 39.09 | 59.82 |
| 5 | 16.62 | 34.37 | 55.86 |
| 6 | 17.79 | 33.34 | 51.45 |
| 7 | 17.15 | 30.55 | 51.19 |

## What percentage goes for debt service, capital outlay?

To get this figure, total debt service and capital outlay payments and divide the result by your net current expenditures.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **15.11%** | **21.88%** | **29.61%** |
| **Region** | | | |
| 1 | 15.00 | 23.18 | 31.80 |
| 2 | 15.94 | 22.88 | 27.49 |
| 3 | 19.80 | 24.43 | 33.18 |
| 4 | 15.31 | 21.01 | 29.47 |
| 5 | 10.14 | 18.16 | 25.80 |
| 6 | 12.35 | 19.47 | 26.23 |
| 7 | 15.81 | 21.83 | 29.77 |
| 8 | 17.45 | 22.35 | 29.64 |
| 9 | 12.15 | 19.37 | 23.67 |
| **Size** | | | |
| 1 | 16.58 | 21.58 | 24.24 |
| 2 | 15.70 | 20.43 | 26.65 |
| 3 | 16.78 | 23.08 | 30.25 |
| 4 | 15.88 | 23.18 | 30.42 |
| 5 | 14.11 | 21.83 | 29.76 |
| 6 | 15.14 | 22.67 | 32.82 |
| 7 | 13.73 | 19.93 | 25.52 |

## How much are we spending for debt service?

To get this figure for your district, add up all debt service payments made this year and divide the total by your expenditure pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$36.48** | **$56.00** | **$81.21** |
| **Region** | | | |
| 1 | 53.02 | 70.26 | 115.86 |
| 2 | 56.98 | 86.19 | 104.25 |
| 3 | 44.62 | 68.89 | 88.24 |
| 4 | 31.10 | 37.84 | 47.98 |
| 5 | 13.87 | 26.43 | 43.06 |
| 6 | 12.94 | 25.11 | 38.95 |
| 7 | 28.66 | 44.69 | 63.94 |
| 8 | 33.82 | 40.18 | 55.04 |
| 9 | 31.36 | 50.22 | 74.70 |
| **Size** | | | |
| 1 | 32.76 | 51.94 | 61.31 |
| 2 | 35.61 | 50.75 | 75.56 |
| 3 | 38.95 | 62.26 | 84.63 |
| 4 | 37.50 | 61.12 | 89.73 |
| 5 | 27.30 | 58.45 | 83.58 |
| 6 | 28.05 | 53.87 | 85.21 |
| 7 | 26.48 | 43.90 | 69.69 |

## How much are we spending for debt service interest?

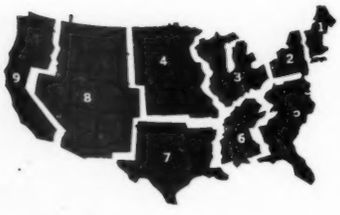
To get this figure, deduct the amount of principal being paid off this year from total debt service payments and divide the remainder by your EPU's.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$10.37** | **$18.64** | **$29.49** |
| **Region** | | | |
| 1 | 9.04 | 21.90 | 36.99 |
| 2 | 15.72 | 34.00 | 44.18 |
| 3 | 13.56 | 24.97 | 34.90 |
| 4 | 10.36 | 19.50 | 29.91 |
| 5 | 3.20 | 8.39 | 17.07 |
| 6 | 1.45 | 5.61 | 8.54 |
| 7 | 9.66 | 16.55 | 28.79 |
| 8 | 8.90 | 17.30 | 22.09 |
| 9 | 8.96 | 14.97 | 23.84 |
| **Size** | | | |
| 1 | 9.93 | 17.21 | 23.26 |
| 2 | 11.59 | 18.90 | 27.37 |
| 3 | 10.60 | 22.31 | 33.08 |
| 4 | 11.35 | 21.24 | 37.25 |
| 5 | 7.37 | 19.19 | 34.06 |
| 6 | 7.60 | 16.34 | 34.83 |
| 7 | 6.26 | 12.98 | 19.42 |

**WHAT IS OUR DISTRICT SIZE?**

1—Over 25,000
2—12,001-25,000
3—6,001-12,000
4—3,001-6,000
5—1,201-3,000
6—601-1,200
7—300-600

*For help in using these charts, see article starting on page 82.*




**REGION 1:** Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

**REGION 2:** New York, New Jersey, Pennsylvania.

**REGION 3:** Ohio Indiana, Illinois, Michigan, Wisconsin.

**REGION 4:** Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

**REGION 5:** Delaware, Maryland, Dist. of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

**REGION 6:** Kentucky, Tennessee, Alabama, Mississippi.

**REGION 7:** Arkansas, Louisiana, Oklahoma, Texas.

**REGION 8:** Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada.

**REGION 9:** Washington, Oregon, California, Alaska.

a district is spending close to the median of $304 per expenditure pupil unit for net current expenditures, its debt service payments and capital outlay combined ordinarily should not exceed $76 per pupil. If they do, the likelihood is that the district is now, or will soon be, taking money from the current educational program to meet its debt obligations.

Of course this point will be reached at different times in different communities. Another district might be spending only $10 per pupil on debt service and $200 on current expenses and still find it impossible to substantially raise its income for capital outlay and debt service without taking money from current expenditures. Another district, probably a wealthier one, might meet this point of resistance when its debt service payments totaled 30% of current expenditures.

The question, then, becomes one not so much of "should we go into debt?" but "how much debt can we allow ourselves to assume?"

### How much debt?

According to the CEI figures *(see page 107)*, in the median district in the United States debt service and capital outlay payments equal 15.1% of net current expenditures. Applying Mort's formula, it would appear that these districts are in no danger of allowing debt payments to detract from the current school program.

One out of four districts in the United States is spending $21.83 on debt service and capital outlay for every $100 being expended on the current program. Some of these districts, at least, are approaching the danger point.

Ten percent of the nation's districts are in trouble. These districts have allocated $29.61 or more for debt service and capital outlay for every $100 they have earmarked for education. Districts in this position should examine their expenditures very carefully to be sure that they are not allowing their building program to tear down the quality of the education they are providing.

### How much money?

The median district in the United States is spending $45.87 on debt service and capital outlay. Breaking this into its two components *(see charts, page 107)*, $36.48 is for debt service and $9.39 for capital outlay.

In terms of capital outlay alone, one quarter of the districts are spending $17.10 and 10% devote at least $32.48 to this item.

The median districts in Region 8 are spending $14.88 on capital outlay, more than four times as much as median districts in Region 1. This could be an indication that Region 1 districts are not spending enough money to equip their schools properly. Or it could be a sign that building—and equipping—schools in the East is less of a problem than in the fast-growing western states.

### Debt service payments

The median district in the United States is spending $36.48 per pupil for debt service this year. One of four districts is spending at least $56.00, while 10% of the schools have debt service payments totaling more than $81.21 per pupil.

Median districts in Region 2 are spending the most for debt service payments, with Region 1 not far behind. Region 6 districts are spending the least.

Comparing this with the *burden* of debt is interesting. (Debt service, in general, accounts for 75% of the total of debt service and capital outlay.) Although they are spending much more on school housing than districts in other regions, those in Region 2 are not carrying an extraordinary burden. They have more money than do districts in other regions, and they seem to be expending it wisely. (Region 1 districts, spending so much less than the others on capital outlay, appear to be placing some of these payments under debt service.)

Payments for debt service can be further broken down. As the chart on page 107 shows, the median district in the United States spends $10.37 per pupil in interest charges on its debt. About $22.93 goes towards paying off the principal. The remainder is eaten up by various service charges.

Interest costs are determined by a number of factors, including, of course, the amount of money being borrowed. The type of bond issued, the rating of the particular district, conditions in the bond market when the bonds are issued and the debt leeway available to the district, are all a part of determining interest charges.

These charges can be of extreme importance to your district. As has been pointed out *(See "Are you getting the best rate for your bonds?" SM May '59)*, keeping these factors in mind when issuing your bonds can save your district enough to build several extra classrooms.

And, since the burden of a district's debt affects the interest rates it must pay, it is apparent that districts which greatly exceed the national medians for debt service and capital outlay may find themselves in a serious cost spiral.

Since these districts are also often the ones that find debt service payments eating into their current expenditures, it would appear, from the CEI data, that some new sources of school housing income are going to have to be provided to help them. **End**

# How much should you spend on maintenance and operation?

**The physical condition of a school building affects the educational program. But high expenditures for maintenance and operation often can reflect an old plant rather than a thorough job. Here is a close look at—and analysis of—school plant care.**

■ ■ ■ Expenditures for plant operation have risen 14.9% during the past two years (*see below*). In 1959 the median district in the United States was spending $27.94 per pupil for operations. This figure rose 6.6% to $29.78 in 1960 and to $32.10 during the current year.

Of course, here too, inflation has taken its toll. But the effect of inflation on plant operations was comparatively small, amounting to only 1% in 1960 and 3% during the current year. So it is safe to say that expenditures for plant operation have risen sharply during the past two years—most of it going to educational betterment.

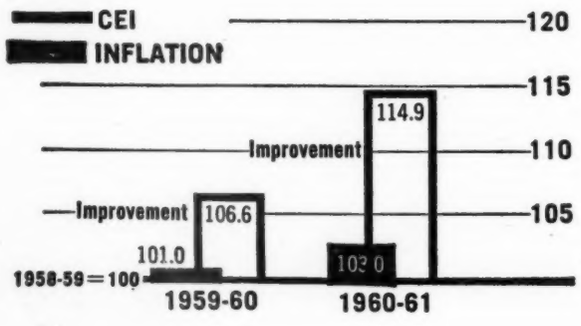
How about maintenance? Since 1959, the cost of maintaining our schools, in median districts, has risen from $9.79 to $11.60. This is an overall increase of 18.5%. (*See chart below.*)

During that same period, the Index of Educational Inflation rose 10.5%, so actual expenditures for maintenance rose 8% over the two years.

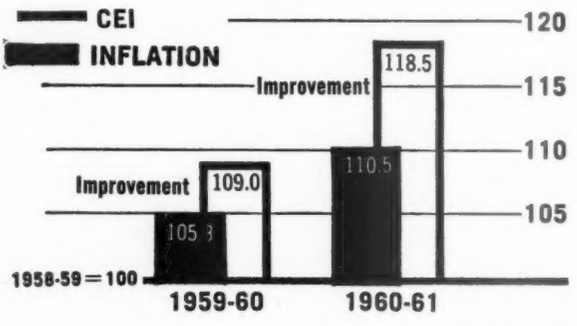
Operation and maintenance are two-edged swords. Any district that spends too little for these vital services is faced with the prospect of deteriorating buildings, a poor teaching situation and lowered morale.

On the other hand, when a district spends too much of its funds on these two areas, direct expenditures for instruction must suffer. These, then, are areas where it is probably better to be average than it is to be in the Quality Quarter or Top Tenth. (Unless, of course, your district's total expenditures are so high that with-

**OPERATION vs. INFLATION**




**MAINTENANCE vs. INFLATION**



## How much are we spending for operations?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$32.10** | **$38.59** | **$47.36** |
| HIGH REGION | 2 39.77 | 2 47.36 | 2 57.53 |
| LOW REGION | 6 13.74 | 6 16.95 | 6 21.89 |
| HIGH SIZE | 1 34.23 | 3 41.02 | 3 53.26 |
| LOW SIZE | 6 27.28 | 6 35.24 | 6 43.70 |

## How much are we spending for heat?

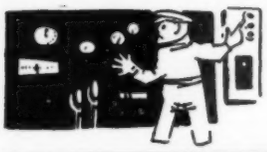
| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$5.45** | **$6.87** | **$ 9.02** |
| HIGH REGION | 1 7.04 | 1 8.83 | 3 10.59 |
| LOW REGION | 7 2.07 | 7 2.45 | 7 3.17 |
| HIGH SIZE | 7 6.13 | 7 8.06 | 6 10.26 |
| LOW SIZE | 1 3.71 | 1 5.45 | 1 6.45 |

## How much are we spending for utilities other than heat?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$5.85** | **$7.10** | **$ 9.09** |
| HIGH REGION | 3 6.91 | 3 8.58 | 3 10.39 |
| LOW REGION | 6 3.12 | 6 4.10 | 6 5.11 |
| HIGH SIZE | 2 5.92 | 3 7.60 | 4 9.81 |
| LOW SIZE | 5 5.01 | 1 6.30 | 1 7.55 |

## How much are we spending for maintenance?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$11.60** | **$15.17** | **$21.24** |
| HIGH REGION | 9 13.45 | 3 20.39 | 2 28.99 |
| LOW REGION | 6 4.68 | 6 7.12 | 6 9.37 |
| HIGH SIZE | 1 15.48 | 1 19.04 | 2 25.83 |
| LOW SIZE | 6 8.60 | 6 13.40 | 4 19.23 |



## MAINTENANCE AND OPERATION

### *How much are we spending for operational salaries?*

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$17.00** | **$22.15** | **$29.95** |
| HIGH REGION | 2 22.25 | 2 29.69 | 3 34.51 |
| LOW REGION | 6 5.33 | 6 7.67 | 6 11.13 |
| HIGH SIZE | 1 23.41 | 1 29.81 | 2 34.51 |
| LOW SIZE | 7 13.62 | 6 17.94 | 6 22.59 |

### *How much are we spending for maintenance salaries?*

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$3.40** | **$5.75** | **$ 8.81** |
| HIGH REGION | 9 6.05 | 9 8.31 | 9 12.86 |
| LOW REGION | 1 .28 | 6 2.57 | 6 3.88 |
| HIGH SIZE | 1 7.36 | 1 9.89 | 1 12.70 |
| LOW SIZE | 7 0 | 6 3.30 | 6 5.82 |

### *How well are we paying custodians?*

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$3,588** | **$4,385** | **$5,027** |
| HIGH REGION | 9 4,640 | 9 5,117 | 9 5,672 |
| LOW REGION | 6 1,996 | 6 2,588 | 6 3,000 |
| HIGH SIZE | 2 4,040 | 2 4,843 | 3 5,439 |
| LOW SIZE | 6 3,316 | 6 4,023 | 6 4,733 |

### *How many custodians do we have for 1,000 students?*

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **5.72** | **7.35** | **9.00** |
| HIGH REGION | 2 6.73 | 2 8.18 | 9 9.66 |
| LOW REGION | 6 3.72 | 6 5.17 | 6 6.51 |
| HIGH SIZE | 1 7.99 | 1 9.16 | 11.09 |
| LOW SIZE | 6 4.76 | 6 6.51 | 8.16 |

out overbalancing the budget you can elect to spend large amounts for operation and maintenance.)

### Per pupil expenditures

Studies made over a period of years have tended to show that expenditures for plant operation are a good indicator of school quality. It was found that as operational costs rose, it could be assumed in most instances that school quality was also rising.

The median district in the nation is spending $32.10 for operation during the current year (*see page 111*). This amounts to 10.5% of the net current operating budget. This percentage is comparatively steady for the Quality Quarter and Top Tenth districts, as well as by region and district size (*see pages 114 and 115 for full figures*).

Twenty-five percent of the nation's districts are spending $38.59 and 10% are spending $47.36 for plant operation. So long as these districts are not allowing this amount to overbalance the rest of their budget, it can be assumed that they are enhancing the quality of the education they are offering.

Costs for operation have been further broken down to provide figures (*see page 111*) on expenditures for heating the buildings (as expected, the northern regions spend more than those in the south) and utilities other than heat.

### How much for maintenance?

Maintenance costs, on the other hand, are not a good indicator of the quality of a district's educational program. In the first place, maintenance can be too easily affected by matters over which the schools have no control—unusually rainy seasons, for example. More important, many districts tend to cut down on their maintenance budgets when they are tight for money. These districts may show up very low on maintenance for one, two or even five years. This does not mean they are doing a good job of educating—only that they are short on cash.

But this is obviously false economy. Sooner or later they are going to have to make all the repairs they have been putting off. So for one or two years their maintenance costs are suddenly high. But again, this tells nothing about the quality of their education. All it tells is that time has finally caught up with them and they are making repairs that should have been budgeted for over a period of years.

The median district in the United States is spending $11.60 per pupil for maintenance (*see page 111*). This represents 3.35% of the median district's budget. Ten percent of the schools spend better than 6% of their budgets on maintenance alone. (*For full figures, see page 115*).

### How are custodians paid?

The role of the school custodian has undergone a major change in the last decade or so. No longer is he a mere janitor who pushes a broom over the floors each night and occasionally washes and waxes the floors.

Instead, he has become an engineer, the operator of expensive and intricate machinery which plays a major part in keeping the school operating properly.

Despite evidence pointing to the importance of custodians, these workers, on the average, have suffered a decline in income in the two years of the CEI study.

While median salaries have increased from $3,443 in 1959 to $3,588 during the current year, the Index of Educational Inflation indicates they should have risen to $3,605 to keep pace with the cost of living. Custodial salaries must have increased by 4.7% over the past two years in order to have kept up with inflation.

While $3,588 is the average salary being paid to custodians in median districts, there are great discrepancies in custodial pay. For example, in Region 6, full-time employees in median districts are receiving only $1,996 annually. In Regions 2 and 9, virtually every district reporting placed its average salaries above that figure. Actually 90% of the districts in Region 9 reported that annual salaries to custodians *exceeded* the national median.

Certainly these districts value their custodians much more highly than do those in Region 6. It is likely that in the latter districts, the custodian has not yet emerged from his days as a broom pusher.

### How many custodians?

The median district in the United States has 5.72 custodians for every 1,000 students. Because custodians are so often called upon to perform both maintenance and operational functions, they have been combined into one grouping to provide this figure.

The Quality Quarter districts (and this is probably closely related to quality), hire 7.35 custodians for 1,000 students, while the Top Tenth hire 9.00. Interestingly, aside from Region 6, among the median districts there is little variation in the number of custodians hired. Looking at the figures in terms of district size, the variation is considerably greater. It is somewhat surprising to see that in this category, the large districts actually staff more heavily per pupil than do the smaller ones. **End**

# STATISTICAL DATA—MAINTENANCE AND OPERATION

## How much are we spending for operation?

To get this figure for your district, total all expenditures for operation and divide the result by your expenditure pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$32.10** | **$38.59** | **$47.36** |
| **Region** | | | |
| 1 | 32.76 | 39.12 | 45.31 |
| 2 | 39.77 | 47.36 | 57.53 |
| 3 | 30.05 | 33.33 | 37.40 |
| 4 | 32.00 | 36.79 | 46.22 |
| 5 | 16.48 | 21.66 | 32.90 |
| 6 | 13.74 | 16.95 | 21.89 |
| 7 | 17.49 | 22.63 | 30.06 |
| 8 | 29.76 | 34.74 | 40.17 |
| 9 | 35.24 | 40.63 | 46.94 |
| **Size** | | | |
| 1 | 34.23 | 40.21 | 43.85 |
| 2 | 30.88 | 40.35 | 52.80 |
| 3 | 33.73 | 41.02 | 53.26 |
| 4 | 30.44 | 39.08 | 47.94 |
| 5 | 28.76 | 36.54 | 45.55 |
| 6 | 27.28 | 35.24 | 43.70 |
| 7 | 29.01 | 37.23 | 45.76 |

## How much are we spending for heat?

To get this figure for your district, divide the total cost for heating your schools by your expenditure pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$ 5.45** | **$ 6.87** | **$ 9.02** |
| **Region** | | | |
| 1 | 7.04 | 8.83 | 10.34 |
| 2 | 6.61 | 7.96 | 10.08 |
| 3 | 6.88 | 8.74 | 10.59 |
| 4 | 5.99 | 7.55 | 8.94 |
| 5 | 3.60 | 4.78 | 5.85 |
| 6 | 2.83 | 3.76 | 4.51 |
| 7 | 2.07 | 2.45 | 3.17 |
| 8 | 4.66 | 5.71 | 7.89 |
| 9 | 3.95 | 5.76 | 8.21 |
| **Size** | | | |
| 1 | 3.71 | 5.45 | 6.45 |
| 2 | 4.07 | 5.62 | 6.84 |
| 3 | 4.54 | 6.20 | 7.76 |
| 4 | 4.56 | 6.78 | 8.99 |
| 5 | 4.88 | 7.22 | 9.08 |
| 6 | 5.63 | 7.70 | 10.26 |
| 7 | 6.13 | 8.06 | 10.10 |

## What percentage of NCE goes for heat and utilities?

To get this figure, add the amount spent for heat to the amount spent for all other utilities and divide the total by your net current expenditures.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **3.72%** | **4.21%** | **5.22%** |
| **Region** | | | |
| 1 | 4.51 | 5.21 | 6.15 |
| 2 | 3.19 | 3.82 | 4.48 |
| 3 | 4.12 | 4.97 | 5.70 |
| 4 | 3.70 | 4.54 | 5.49 |
| 5 | 3.30 | 3.98 | 5.03 |
| 6 | 3.42 | 4.20 | 5.14 |
| 7 | 2.78 | 3.27 | 4.15 |
| 8 | 3.21 | 3.88 | 4.44 |
| 9 | 2.91 | 3.65 | 4.51 |
| **Size** | | | |
| 1 | 2.60 | 3.31 | 3.70 |
| 2 | 3.13 | 3.70 | 4.14 |
| 3 | 3.13 | 3.81 | 4.51 |
| 4 | 3.34 | 3.93 | 4.78 |
| 5 | 3.51 | 4.51 | 5.47 |
| 6 | 3.73 | 4.65 | 5.37 |
| 7 | 4.00 | 5.10 | 5.81 |

## What percentage of NCE goes for plant operation?

To get this figure for your district, divide the total cost for operation by your net current operating expenditures.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **10.55%** | **11.09%** | **12.51%** |
| **Region** | | | |
| 1 | 10.58 | 11.76 | 12.82 |
| 2 | 9.63 | 10.13 | 11.54 |
| 3 | 11.34 | 12.83 | 13.75 |
| 4 | 10.19 | 11.53 | 12.73 |
| 5 | 7.80 | 9.32 | 10.35 |
| 6 | 7.35 | 8.38 | 10.14 |
| 7 | 7.56 | 8.85 | 10.04 |
| 8 | 9.16 | 10.37 | 11.57 |
| 9 | 10.17 | 11.29 | 12.17 |
| **Size** | | | |
| 1 | 10.58 | 11.27 | 12.22 |
| 2 | 9.76 | 11.00 | 12.67 |
| 3 | 9.61 | 10.97 | 12.71 |
| 4 | 9.18 | 10.50 | 12.00 |
| 5 | 9.37 | 10.77 | 12.63 |
| 6 | 9.39 | 11.11 | 12.13 |
| 7 | 9.86 | 11.33 | 13.03 |

## How much are we spending for other utilities?

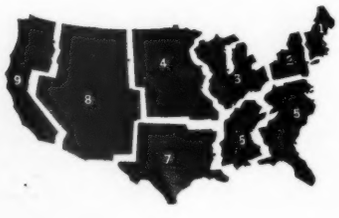
To get this figure for your district, total expenditures for all utilities *except heat* and divide the result by your expenditure pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$ 5.85** | **$ 7.10** | **$ 9.09** |
| **Region** | | | |
| 1 | 5.69 | 7.91 | 9.67 |
| 2 | 6.46 | 7.97 | 9.71 |
| 3 | 6.91 | 8.58 | 10.38 |
| 4 | 5.53 | 6.86 | 8.51 |
| 5 | 4.00 | 4.84 | 6.17 |
| 6 | 3.12 | 4.10 | 5.11 |
| 7 | 4.37 | 5.83 | 7.39 |
| 8 | 5.11 | 6.64 | 7.62 |
| 9 | 6.17 | 7.47 | 9.10 |
| **Size** | | | |
| 1 | 5.16 | 6.30 | 7.55 |
| 2 | 5.92 | 7.32 | 9.48 |
| 3 | 5.80 | 7.60 | 8.69 |
| 4 | 5.48 | 7.08 | 9.81 |
| 5 | 5.01 | 7.10 | 9.31 |
| 6 | 5.16 | 6.72 | 8.61 |
| 7 | 5.20 | 7.24 | 9.60 |

## How much are we spending for maintenance of plant?

To get this figure for your district, total all expenditures for maintenance and divide the result by your expenditure pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **Nation** | **$11.60** | **$15.17** | **$21.24** |
| **Region** | | | |
| 1 | 8.43 | 11.64 | 15.63 |
| 2 | 13.09 | 18.82 | 28.99 |
| 3 | 13.19 | 20.39 | 25.43 |
| 4 | 9.48 | 14.08 | 20.43 |
| 5 | 8.43 | 11.23 | 15.08 |
| 6 | 4.68 | 7.12 | 9.37 |
| 7 | 6.94 | 10.99 | 13.90 |
| 8 | 11.28 | 15.77 | 21.24 |
| 9 | 13.45 | 18.30 | 23.07 |
| **Size** | | | |
| 1 | 15.48 | 19.04 | 21.80 |
| 2 | 12.17 | 17.02 | 25.83 |
| 3 | 10.69 | 15.43 | 21.06 |
| 4 | 9.49 | 14.08 | 19.23 |
| 5 | 9.16 | 13.53 | 19.44 |
| 6 | 8.60 | 13.40 | 20.71 |
| 7 | 8.67 | 15.80 | 23.84 |




**REGION 1:** Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

**REGION 2:** New York, New Jersey, Pennsylvania.

**REGION 3:** Ohio Indiana, Illinois, Michigan, Wisconsin.

**REGION 4:** Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

**REGION 5:** Delaware, Maryland, Dist. of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

**REGION 6:** Kentucky, Tennessee, Alabama, Mississippi.

**REGION 7:** Arkansas, Louisiana, Oklahoma, Texas.

**REGION 8:** Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada.

**REGION 9:** Washington, Oregon, California, Alaska.

# STATISTICAL DATA

## What percentage of NCE goes for plant maintenance?

To get this figure for your district, divide the total cost for maintenance by your net current operating expenditures.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| Nation | 3.82% | 4.71% | 6.02% |
| Region | | | |
| 1 | 2.69 | 3.79 | 4.91 |
| 2 | 3.24 | 4.83 | 6.23 |
| 3 | 3.84 | 5.13 | 7.81 |
| 4 | 3.24 | 4.79 | 5.94 |
| 5 | 3.78 | 4.81 | 6.04 |
| 6 | 2.56 | 3.56 | 4.86 |
| 7 | 3.08 | 4.04 | 5.27 |
| 8 | 3.58 | 4.87 | 5.79 |
| 9 | 3.82 | 5.00 | 6.08 |
| Size | | | |
| 1 | 4.71 | 5.26 | 6.21 |
| 2 | 3.89 | 5.24 | 6.42 |
| 3 | 3.62 | 4.60 | 5.68 |
| 4 | 3.08 | 4.27 | 5.66 |
| 5 | 3.09 | 4.41 | 5.60 |
| 6 | 3.06 | 4.62 | 6.35 |
| 7 | 3.20 | 5.07 | 6.65 |

## How much are we spending for maintenance salaries?

To get this figure for your district, divide the total salaries paid to maintenance personnel by your expenditure pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| Nation | $ 3.40 | $ 5.75 | $ 8.81 |
| Region | | | |
| 1 | .28 | 3.54 | 5.58 |
| 2 | 2.18 | 6.23 | 8.84 |
| 3 | 3.07 | 6.22 | 9.74 |
| 4 | 2.05 | 4.30 | 8.64 |
| 5 | 2.57 | 4.43 | 7.37 |
| 6 | 1.65 | 2.57 | 3.88 |
| 7 | 2.24 | 4.86 | 6.88 |
| 8 | 3.74 | 6.87 | 10.58 |
| 9 | 6.05 | 8.31 | 12.86 |
| Size | | | |
| 1 | 7.36 | 9.89 | 12.70 |
| 2 | 4.92 | 7.10 | 9.99 |
| 3 | 4.17 | 7.04 | 9.39 |
| 4 | 2.57 | 5.20 | 8.14 |
| 5 | 1.87 | 3.83 | 8.02 |
| 6 | 1.44 | 3.30 | 5.82 |
| 7 | .00 | 3.71 | 8.25 |

## How many custodians for maintenance and operation?

To get this figure, total all custodians under maintenance and operation and divide the total by your staffing pupil units divided by 1,000.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| Nation | 5.72 | 7.35 | 9.00 |
| Region | | | |
| 1 | 5.24 | 6.34 | 7.69 |
| 2 | 6.73 | 8.18 | 9.45 |
| 3 | 6.43 | 8.10 | 9.30 |
| 4 | 5.42 | 6.63 | 8.61 |
| 5 | 5.42 | 7.07 | 9.02 |
| 6 | 3.72 | 5.17 | 6.51 |
| 7 | 4.88 | 6.80 | 8.54 |
| 8 | 6.00 | 7.02 | 8.52 |
| 9 | 6.49 | 7.83 | 9.66 |
| Size | | | |
| 1 | 7.99 | 9.16 | 11.09 |
| 2 | 6.92 | 8.36 | 9.87 |
| 3 | 6.44 | 8.11 | 9.60 |
| 4 | 5.79 | 7.11 | 8.28 |
| 5 | 5.14 | 6.61 | 8.18 |
| 6 | 4.76 | 6.51 | 8.16 |
| 7 | 5.05 | 6.54 | 9.30 |

## How much are we spending for operational salaries?

To get this figure for your district, total all salaries for custodians under operation and divide the result by your expenditure pupil units.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| Nation | $17.00 | $22.15 | $29.95 |
| Region | | | |
| 1 | 16.44 | 20.87 | 25.05 |
| 2 | 22.25 | 29.69 | 34.29 |
| 3 | 19.52 | 29.64 | 34.51 |
| 4 | 15.15 | 20.52 | 29.46 |
| 5 | 6.60 | 11.43 | 20.02 |
| 6 | 5.33 | 7.67 | 11.13 |
| 7 | 8.95 | 12.01 | 17.02 |
| 8 | 17.02 | 20.36 | 25.35 |
| 9 | 21.49 | 25.26 | 31.64 |
| Size | | | |
| 1 | 23.41 | 29.81 | 32.48 |
| 2 | 18.98 | 26.73 | 34.51 |
| 3 | 20.29 | 25.57 | 32.88 |
| 4 | 17.15 | 22.76 | 29.95 |
| 5 | 14.44 | 20.13 | 25.35 |
| 6 | 14.08 | 17.94 | 22.59 |
| 7 | 13.62 | 19.44 | 24.70 |

## What percentage of NCE goes for custodial salaries?

To get this figure, total all salaries to custodial personnel under maintenance and operation and divide the result by your net current expenditures.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| Nation | 6.71% | 7.66% | 9.49% |
| Region | | | |
| 1 | 5.77 | 6.72 | 7.51 |
| 2 | 6.02 | 7.19 | 8.53 |
| 3 | 7.23 | 8.92 | 10.50 |
| 4 | 5.71 | 7.44 | 9.40 |
| 5 | 4.78 | 6.51 | 8.23 |
| 6 | 3.93 | 5.19 | 6.08 |
| 7 | 4.76 | 6.18 | 7.60 |
| 8 | 6.46 | 8.08 | 8.99 |
| 9 | 7.75 | 9.45 | 10.56 |
| Size | | | |
| 1 | 8.77 | 9.96 | 10.56 |
| 2 | 7.67 | 9.08 | 10.38 |
| 3 | 7.16 | 8.53 | 10.07 |
| 4 | 6.20 | 7.39 | 8.56 |
| 5 | 5.66 | 7.04 | 8.24 |
| 6 | 5.27 | 6.19 | 7.85 |
| 7 | 5.26 | 6.32 | 7.79 |

## How well are we paying custodial personnel?

To get this figure, total all custodial salaries under maintenance and operation and divide by the number of full-time persons or equivalents.

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| Nation | $3,588 | $4,385 | $5,027 |
| Region | | | |
| 1 | 3,608 | 4,218 | 4,600 |
| 2 | 4,161 | 4,833 | 5,278 |
| 3 | 4,090 | 4,893 | 5,292 |
| 4 | 3,720 | 4,234 | 4,744 |
| 5 | 2,147 | 2,888 | 3,559 |
| 6 | 1,996 | 2,588 | 3,000 |
| 7 | 2,453 | 3,000 | 3,340 |
| 8 | 3,692 | 4,273 | 4,940 |
| 9 | 4,640 | 5,117 | 5,672 |
| Size | | | |
| 1 | 4,023 | 4,834 | 5,208 |
| 2 | 4,040 | 4,843 | 5,421 |
| 3 | 3,983 | 4,694 | 5,439 |
| 4 | 3,668 | 4,250 | 5,115 |
| 5 | 3,521 | 4,300 | 4,877 |
| 6 | 3,316 | 4,023 | 4,733 |
| 7 | 3,400 | 4,090 | 4,777 |

**WHAT IS OUR DISTRICT SIZE?**

1—Over 25,000
2—12,001-25,000
3—6,001-12,000
4—3,001-6,000
5—1,201-3,000
6—601-1,200
7—300-600

*For help in using these charts, see article starting on page 82.*

# How much should you spend on auxiliary services?

**Schools must provide certain services that do not *directly* add to the education of their students. Included among these "auxiliary" services are transportation, pensions, insurance, health services, feeding and student body activities. Here is an examination of their costs.**

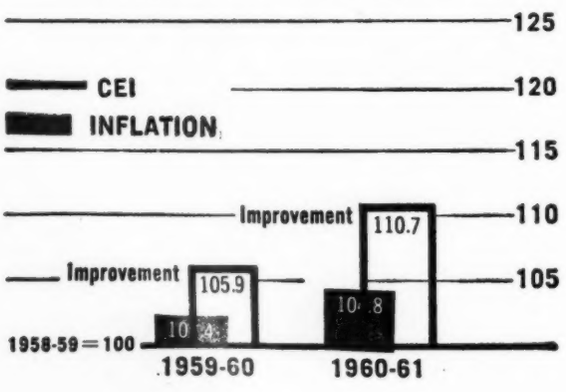
■ ■ ■ Auxiliary services provided by the schools account for close to 10% of the total current school budget. The three major items included are transportation, fixed charges and health services. Food services, student body activities and attendance service also fall into this loose category.

What brings these six areas together? Generally, although they are an important part of every school's operation, they do not contribute directly to the education children receive.

### How much goes for transportation?

Transportation services are not included when we speak of a district's net current expenditures. The reason is the tremendous variation in costs to school districts—variations that in no way affect the quality of the educational program.

**TRANSPORTATION vs. INFLATION**




Expenditures for transportation services have risen from $12.10 in 1959 to $12.81 in 1960 and $13.40 in 1961. This represents an increase over the two years (*see chart, below*) of 10.7%. During the same period, the Index of Educational Inflation rose just 4.8%, indicating that in the median district considerably more is being spent on pupil transportation than ever before. In this case, however, we hesitate to call it educational betterment. As a matter of fact, to hear some experts in physical education tell it, we might all be better off if bus transportation were curtailed sharply and students were asked to do more walking to and from their schools.

In the median school district, transportation amounts to 4.41% added on to net current expenditures (*see chart, opposite page*). But one-quarter of our schools spend as much as $8.76 to get children to school for every $100 spent on educating them, while one in 10 districts spends $12.69 or more for every $100 of net current expenditures.

Districts in Region 6, which trail in almost every other expenditure category, spend a greater share of their education dollars on transportation than do those in any other part of the nation. This is true for the Average, the Quality Quarter and the Top Tenth districts.

## *How much are we spending for transportation?*

| | Average | | Quality Quarter | | Top Tenth | |
|---|---|---|---|---|---|---|
| **National** | **$13.40** | | **$24.94** | | **$36.97** | |
| HIGH REGION | 2 | 20.18 | 2 | 30.72 | 2 | 42.66 |
| LOW REGION | 3 | 10.99 | 6 | 19.70 | 7 | 28.18 |
| HIGH SIZE | 7 | 25.51 | 7 | 34.84 | 7 | 49.34 |
| LOW SIZE | 1 | 2.88 | 1 | 6.57 | 1 | 10.37 |

## *What percentage above NCE goes for transportation?*

| | Average | | Quality Quarter | | Top Tenth | |
|---|---|---|---|---|---|---|
| **National** | **4.41%** | | **8.76%** | | **12.69%** | |
| HIGH REGION | 6 | 7.18 | 6 | 11.72 | 6 | 21.38 |
| LOW REGION | 3 | 3.46 | 3 | 7.03 | 9 | 10.60 |
| HIGH SIZE | 7 | 8.98 | 7 | 11.88 | 7 | 15.46 |
| LOW SIZE | 1 | .92 | 1 | 2.36 | 1 | 3.42 |

## *How much are we spending for health?*

| | Average | | Quality Quarter | | Top Tenth | |
|---|---|---|---|---|---|---|
| **National** | **$1.80** | | **$4.10** | | **$ 7.14** | |
| HIGH REGION | 2 | 7.02 | 2 | 9.75 | 2 | 11.84 |
| LOW REGION | 6 | .10 | 6 | .49 | 6 | .68 |
| HIGH SIZE | 2 | 2.45 | 3 | 4.83 | 2 | 8.00 |
| LOW SIZE | 7 | .68 | 6 | 3.60 | 1 | 5.49 |

## *How many professionals have we for health services? (Per 1,000 students)*

| | Average | | Quality Quarter | | Top Tenth | |
|---|---|---|---|---|---|---|
| **National** | **.34** | | **.80** | | **1.38** | |
| HIGH REGION | 2 | 1.39 | 2 | 1.83 | 2 | 2.34 |
| LOW REGION | 5/6 | 0 | 6 | 0 | 6 | .16 |
| HIGH SIZE | 2 | .46 | 6 | .94 | 7 | 1.70 |
| LOW SIZE | 6/7 | 0 | 1 | .64 | 1 | 1.05 |

## AUXILIARY SERVICES

### How much are we spending for fixed charges?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$10.90** | **$18.78** | **$29.74** |
| HIGH REGION | 2 24.32 | 2 58.80 | 2 69.37 |
| LOW REGION | 7 2.91 | 7 5.27 | 5 9.70 |
| HIGH SIZE | 7 12.14 | 5 19.34 | 2 35.66 |
| LOW SIZE | 3 8.58 | 4 17.60 | 5 25.90 |

### How much are we spending for retirement programs?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$ 6.70** | **$13.88** | **$26.60** |
| HIGH REGION | 2 19.13 | 2 50.49 | 2 59.68 |
| LOW REGION | 7 0 | 7 .56 | 5 6.25 |
| HIGH SIZE | 1 8.19 | 1 15.17 | 2 30.57 |
| LOW SIZE | 6 3.47 | 3/4 12.49 | 7 18.81 |

### How much are we spending for food services?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$ .60** | **$1.69** | **$ 6.73** |
| HIGH REGION | 9 1.45 | 9 6.78 | 9 21.76 |
| LOW REGION | 3, 4, 6, 7 0 | 7 .29 | 6 1.40 |
| HIGH SIZE | 3 .68 | 7 3.17 | 6 17.94 |
| LOW SIZE | 2, 6, 7 0 | 1 .51 | 2 1.66 |

### How much are we spending for student body activities?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| **National** | **$ .00** | **$1.35** | **$3.74** |
| HIGH REGION | 2 1.30 | 7 3.36 | 4 9.10 |
| LOW REGION | 3, 4, 5, 6, 9 0 | 6/9 0 | 5 .72 |
| HIGH SIZE | All 0 | 6 1.93 | 5 4.59 |
| LOW SIZE | All 0 | 2 .49 | 2 1.63 |

As might be expected, the smaller districts have to spend a larger percentage of their budgets on transportation than do the larger ones.

### How much goes for health?

Expenditures for health services rose from $1.73 in 1959 to $1.83 in 1960, then fell back to $1.80 per pupil in 1961. From 1959 to 1960, the 5.8% increase represented a slight gain on the effects of inflation (*see chart, below*). But over the two-year period, health services expenditures have risen only 4%, while the Index of Educational Inflation has risen 6.7%. Considering that in many regions of the nation health services have been at an inadequate level, this loss to inflation could be serious.

The discrepancy in expenditures for health services from region to region (*see chart, page 117*) is huge and obviously represents a disagreement over the responsibility of the schools, as well as a difference in ability to pay.

Salaries of health personnel have advanced from $3,142 in 1959 to $3,300 in 1961, an increase of 5%. Since the Index of Educational Inflation rose 9.6% for this category of worker, it is obvious that school pay is not only low, it is losing out to inflation.

### How much for fixed charges?

Expenditures for fixed charges have risen from $8.93 in 1959 to $9.76 in 1960 and $10.90 in 1961 (*see below, right*). This represented an increase over the two years of 22.1%, the greatest amount by which any part of the median district's expenditures increased. The Index of Educational Inflation accounted for just 5.6% of the increase.

Fixed charges is made up largely of employee benefits—such as retirement funds, Social Security and health plans—as well as insurance and rental of land and buildings. It is the effect of the growth of retirement and Social Security plans that is being felt most sharply here.

While the median districts spend $10.90 per year (note the difference—opposite page—between Regions 2 and 7), the Quality Quarter districts nationally raise their expenditures up to $18.78 per pupil and the Top Tenth schools provide better than $29.74 per pupil for these services to their teachers.

Although this certainly cannot be considered a direct aid to education in a school district, there is no doubt that the schools offering better retirement and health plans have a powerful ally in attracting better teachers.

In the median districts nationally, retirement payments take up almost two-thirds of the expenditures for fixed charges (*see opposite page*). But among the Top Tenth districts, payments to retirement funds represent all but $3 of the total expenditures, giving a pretty good idea of the influence pension plans have on these school costs.

### Other services

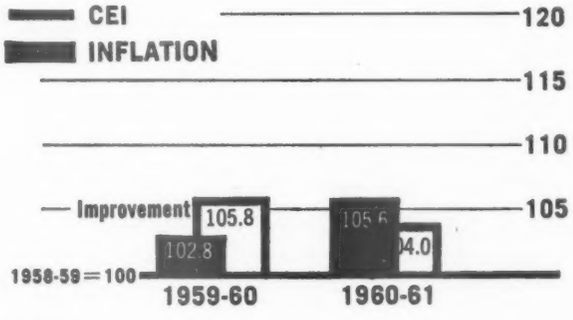
Expenditures for attendance services have remained at about .1% of the net current budget over the three years of this study. (*See page 121 for full figures for 1961.*)

Food service expenditures have increased slightly over the past few years, but they remain a very minor part of the school budget. This is because the greatest part of the expense of food service is borne by the government (in the form of subsidies) and individual students and teachers. In the CEI study, we were interested only in expenses borne directly by the district itself—the subsidy the district provides to make food more readily available for all who need it.

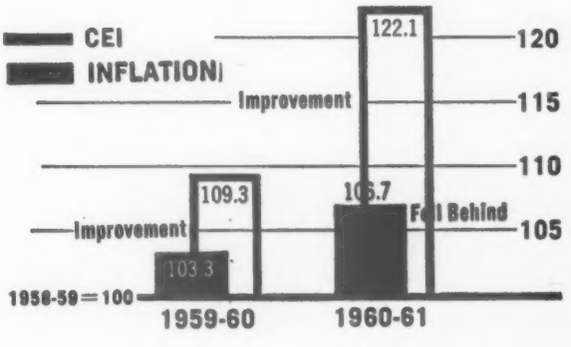
Student body activities are another question. Last year, noting that more than half the nation's schools spent nothing "out of pocket" for these activities, we posed this question: "Are camera clubs, student newspapers, orchestras, and planned social activities an important part of the school program? . . . If the answer is 'yes,' are we really following a proper course when we turn over the financing of these activities to the whims and pet projects of outside groups?"

There are many ways to finance student body activities. One of the favorites is to charge participating students. Another is to use receipts from various affairs, such as football games. Still another involves the proceeds from vending machines and the like. Outside groups are always welcome as sponsors. Judging from the figures (*see opposite page*), few districts think of these activities as being worthy of the investment of school funds.

**HEALTH vs. INFLATION**




**FIXED CHARGES vs. INFLATION**



# STATISTICAL DATA—AUXILIARY SERVICES

## How much are we spending for transportation services?

To get this figure for your district, divide the total amount spent for pupil transportation services by your expenditure pupil units.

| Nation | Average $13.40 | Quality Quarter $24.94 | Top Tenth $36.97 |
|---|---|---|---|
| **Region** | | | |
| 1 | 14.70 | 23.62 | 38.06 |
| 2 | 20.18 | 30.72 | 42.66 |
| 3 | 10.99 | 20.19 | 33.19 |
| 4 | 18.69 | 29.80 | 36.25 |
| 5 | 11.98 | 21.98 | 30.33 |
| 6 | 11.90 | 19.70 | 34.63 |
| 7 | 12.38 | 20.70 | 28.18 |
| 8 | 12.82 | 23.26 | 39.65 |
| 9 | 14.06 | 26.99 | 36.85 |
| **Size** | | | |
| 1 | 2.88 | 6.57 | 10.37 |
| 2 | 6.06 | 10.97 | 15.30 |
| 3 | 7.80 | 14.14 | 22.23 |
| 4 | 12.97 | 20.34 | 28.52 |
| 5 | 15.54 | 24.70 | 34.63 |
| 6 | 21.24 | 33.19 | 44.05 |
| 7 | 25.51 | 34.84 | 49.34 |

## What percentage of NCE goes for transportation?

To get this figure for your district, divide the total spent for pupil transportation services by your total net current operating expenses.

| Nation | Average 4.41% | Quality Quarter 8.76% | Top Tenth 12.69% |
|---|---|---|---|
| **Region** | | | |
| 1 | 5.00 | 7.79 | 11.63 |
| 2 | 5.14 | 8.60 | 11.71 |
| 3 | 3.46 | 7.03 | 11.13 |
| 4 | 5.76 | 9.93 | 13.30 |
| 5 | 5.55 | 10.10 | 14.06 |
| 6 | 7.18 | 11.72 | 21.38 |
| 7 | 5.07 | 8.71 | 12.39 |
| 8 | 4.06 | 7.40 | 12.07 |
| 9 | 3.86 | 7.37 | 10.60 |
| **Size** | | | |
| 1 | .92 | 2.36 | 3.42 |
| 2 | 1.92 | 3.49 | 6.43 |
| 3 | 2.44 | 4.61 | 8.15 |
| 4 | 4.10 | 7.01 | 11.08 |
| 5 | 5.46 | 8.59 | 12.67 |
| 6 | 7.32 | 10.87 | 14.77 |
| 7 | 8.98 | 11.88 | 15.46 |

## How much are we spending for salaries for health personnel?

To get this figure, total the salaries for all professional health personnel and divide the result by your expenditure pupil units.

| Nation | Average $ 1.30 | Quality Quarter $ 3.50 | Top Tenth $ 6.05 |
|---|---|---|---|
| **Region** | | | |
| 1 | 3.17 | 4.56 | 6.32 |
| 2 | 6.15 | 9.32 | 11.05 |
| 3 | .68 | 2.41 | 3.43 |
| 4 | 1.43 | 2.44 | 3.35 |
| 5 | .00 | .57 | 1.40 |
| 6 | .00 | .00 | .55 |
| 7 | .39 | 1.97 | 2.90 |
| 8 | 1.36 | 2.97 | 5.13 |
| 9 | 2.36 | 4.52 | 6.09 |
| **Size** | | | |
| 1 | 1.86 | 3.43 | 4.74 |
| 2 | 2.18 | 3.59 | 6.93 |
| 3 | 1.80 | 4.15 | 6.69 |
| 4 | 1.68 | 3.86 | 6.05 |
| 5 | 1.38 | 3.24 | 5.79 |
| 6 | .00 | 3.24 | 5.58 |
| 7 | .00 | 2.85 | 6.21 |

## How much are we spending for transportation salaries?

To get this figure, total the salaries spent for pupil transportation and divide this figure by your expenditure pupil units.

| Nation | Average $ 4.20 | Quality Quarter $10.10 | Top Tenth $16.68 |
|---|---|---|---|
| **Region** | | | |
| 1 | .00 | 2.70 | 8.37 |
| 2 | .00 | 8.74 | 19.18 |
| 3 | 4.14 | 10.48 | 15.55 |
| 4 | 4.46 | 14.11 | 19.16 |
| 5 | 5.05 | 9.69 | 14.73 |
| 6 | 2.28 | 8.70 | 15.08 |
| 7 | 5.61 | 9.00 | 12.74 |
| 8 | 4.81 | 11.28 | 19.94 |
| 9 | 7.20 | 11.60 | 18.73 |
| **Size** | | | |
| 1 | .59 | 2.37 | 4.96 |
| 2 | 2.02 | 5.92 | 9.10 |
| 3 | 2.16 | 6.41 | 10.78 |
| 4 | 3.53 | 8.70 | 15.55 |
| 5 | 4.89 | 9.69 | 15.20 |
| 6 | 6.58 | 14.92 | 21.31 |
| 7 | 9.15 | 14.89 | 21.37 |

## How much are we spending for health services?

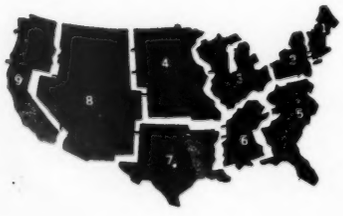
To get this figure for your district, divide the total amount spent for health services by your expenditure pupil units.

| Nation | Average $ 1.80 | Quality Quarter $ 4.10 | Top Tenth $ 7.14 |
|---|---|---|---|
| **Region** | | | |
| 1 | 3.51 | 4.91 | 6.86 |
| 2 | 7.02 | 9.75 | 11.84 |
| 3 | 1.14 | 2.80 | 4.20 |
| 4 | 1.59 | 2.63 | 4.31 |
| 5 | .37 | .79 | 1.97 |
| 6 | .10 | .49 | .68 |
| 7 | .65 | 2.14 | 3.18 |
| 8 | 1.90 | 3.45 | 5.87 |
| 9 | 2.71 | 5.56 | 7.52 |
| **Size** | | | |
| 1 | 2.11 | 3.74 | 5.49 |
| 2 | 2.45 | 4.37 | 8.00 |
| 3 | 2.06 | 4.83 | 7.52 |
| 4 | 2.05 | 4.40 | 7.29 |
| 5 | 1.81 | 3.82 | 6.40 |
| 6 | .83 | 3.60 | 6.44 |
| 7 | .68 | 3.77 | 7.48 |

## How many professionals have we for health?

To get this figure for your district, divide your staffing pupil units by 1,000, then divide the number of professional health personnel by the result.

| Nation | Average .34 | Quality Quarter .80 | Top Tenth 1.38 |
|---|---|---|---|
| **Region** | | | |
| 1 | .73 | 1.12 | 1.65 |
| 2 | 1.39 | 1.83 | 2.34 |
| 3 | .18 | .55 | .76 |
| 4 | .32 | .60 | .85 |
| 5 | .00 | .22 | .56 |
| 6 | .00 | .00 | .16 |
| 7 | .12 | .48 | .82 |
| 8 | .35 | .81 | 1.13 |
| 9 | .46 | .78 | 1.09 |
| **Size** | | | |
| 1 | .45 | .64 | 1.05 |
| 2 | .46 | .71 | 1.16 |
| 3 | .39 | .91 | 1.33 |
| 4 | .39 | .82 | 1.40 |
| 5 | .42 | .71 | 1.15 |
| 6 | .00 | .94 | 1.34 |
| 7 | .00 | .93 | 1.70 |




**REGION 1:** Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

**REGION 2:** New York, New Jersey, Pennsylvania.

**REGION 3:** Ohio Indiana, Illinois, Michigan, Wisconsin.

**REGION 4:** Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

**REGION 5:** Delaware, Maryland, Dist. of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

**REGION 6:** Kentucky, Tennessee, Alabama, Mississippi.

**REGION 7:** Arkansas, Louisiana, Oklahoma, Texas.

**REGION 8:** Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada.

**REGION 9:** Washington, Oregon, California, Alaska.

# STATISTICAL DATA

## How well are we paying health services personnel?

To get this figure for your district, divide the total salaries for health services personnel by the number of health personnel.

| Nation | Average $3,300 | Quality Quarter $5,042 | Top Tenth $6,350 |
|---|---|---|---|
| **Region** | | | |
| 1 | 3,583 | 5,042 | 6,116 |
| 2 | 5,311 | 6,250 | 7,312 |
| 3 | 5,279 | 5,480 | 6,762 |
| 4 | 3,200 | 4,325 | 5,475 |
| 5 | 0 | 2,850 | 4,439 |
| 6 | 0 | 0 | 2,900 |
| 7 | 1,465 | 4,180 | 4,833 |
| 8 | 3,611 | 4,675 | 5,400 |
| 9 | 5,260 | 6,583 | 7,484 |
| **Size** | | | |
| 1 | 4,662 | 6,057 | 6,752 |
| 2 | 4,523 | 5,920 | 7,726 |
| 3 | 4,200 | 5,725 | 6,772 |
| 4 | 4,156 | 5,550 | 6,700 |
| 5 | 3,150 | 4,675 | 5,951 |
| 6 | 0 | 3,800 | 5,324 |
| 7 | 0 | 3,000 | 5,200 |

## How much are we spending for employee retirement plans?

To get this figure, total the amount contributed by your district for retirement, Social Security, and pension payments and divide by your EPU's.

| Nation | Average $ 6.70 | Quality Quarter $13.88 | Top Tenth $26.60 |
|---|---|---|---|
| **Region** | | | |
| 1 | .76 | 3.57 | 12.82 |
| 2 | 19.13 | 50.49 | 59.68 |
| 3 | 1.77 | 6.08 | 25.77 |
| 4 | 10.39 | 14.05 | 16.52 |
| 5 | 1.24 | 3.50 | 6.25 |
| 6 | .54 | 1.21 | 8.09 |
| 7 | .00 | .56 | 6.65 |
| 8 | 12.49 | 16.16 | 19.00 |
| 9 | 10.34 | 15.07 | 19.04 |
| **Size** | | | |
| 1 | 8.19 | 15.17 | 26.54 |
| 2 | 6.98 | 14.83 | 30.57 |
| 3 | 4.50 | 12.49 | 19.13 |
| 4 | 4.56 | 12.49 | 25.73 |
| 5 | 4.66 | 14.29 | 19.00 |
| 6 | 3.47 | 12.80 | 22.60 |
| 7 | 7.07 | 13.81 | 18.81 |

## How much are we spending for food services?

To get this figure, divide the total amount spent for food services but not reimbursed by receipts, by your EPU's.

| Nation | Average $ .60 | Quality Quarter $ 1.69 | Top Tenth $ 6.73 |
|---|---|---|---|
| **Region** | | | |
| 1 | .18 | 1.02 | 2.73 |
| 2 | .72 | 1.81 | 4.43 |
| 3 | .00 | 1.05 | 19.99 |
| 4 | .00 | 1.17 | 18.45 |
| 5 | .32 | 2.37 | 4.52 |
| 6 | .00 | .33 | 1.40 |
| 7 | .00 | .29 | 1.91 |
| 8 | .31 | 1.49 | 5.51 |
| 9 | 1.45 | 6.78 | 21.76 |
| **Size** | | | |
| 1 | .07 | .51 | 2.49 |
| 2 | .00 | .62 | 1.66 |
| 3 | .68 | 1.40 | 5.11 |
| 4 | .28 | 1.53 | 4.35 |
| 5 | .07 | 1.89 | 5.55 |
| 6 | .00 | 3.01 | 17.94 |
| 7 | .00 | 3.17 | 11.24 |

## How much are we spending for fixed charges?

To get this figure for your district, divide the total amount spent for fixed charges by your expenditure pupil units.

| Nation | Average $10.90 | Quality Quarter $18.78 | Top Tenth $29.74 |
|---|---|---|---|
| **Region** | | | |
| 1 | 4.59 | 10.20 | 15.43 |
| 2 | 24.32 | 58.80 | 69.37 |
| 3 | 7.03 | 18.57 | 31.45 |
| 4 | 13.37 | 17.65 | 21.68 |
| 5 | 3.83 | 6.46 | 9.70 |
| 6 | 3.65 | 6.73 | 9.94 |
| 7 | 2.91 | 5.27 | 10.36 |
| 8 | 17.85 | 23.40 | 29.79 |
| 9 | 19.94 | 20.86 | 27.19 |
| **Size** | | | |
| 1 | 11.78 | 18.91 | 31.70 |
| 2 | 10.37 | 19.14 | 35.66 |
| 3 | 8.58 | 17.85 | 28.25 |
| 4 | 9.18 | 17.60 | 28.28 |
| 5 | 8.68 | 19.34 | 25.90 |
| 6 | 8.94 | 18.16 | 31.66 |
| 7 | 12.14 | 19.26 | 27.84 |

## How much are we spending for attendance services?

To get this figure for your district, divide the total amount spent for attendance services by your expenditure pupil units.

| Nation | Average $ .30 | Quality Quarter $ .94 | Top Tenth $ 2.09 |
|---|---|---|---|
| **Region** | | | |
| 1 | .07 | .21 | .65 |
| 2 | .50 | 1.22 | 1.90 |
| 3 | .02 | .96 | 2.33 |
| 4 | .00 | .36 | 1.00 |
| 5 | .29 | .96 | 1.82 |
| 6 | 1.06 | 2.53 | 4.06 |
| 7 | .00 | .67 | 1.50 |
| 8 | .08 | .88 | 1.46 |
| 9 | .00 | 1.09 | 2.92 |
| **Size** | | | |
| 1 | .98 | 2.34 | 3.15 |
| 2 | .72 | 1.50 | 2.34 |
| 3 | .15 | .66 | 1.02 |
| 4 | .11 | 1.07 | 1.86 |
| 5 | .02 | .57 | 1.69 |
| 6 | .00 | .37 | 2.82 |
| 7 | .00 | .15 | .94 |

## How much are we spending for student body activities?

To get this figure, divide the total amount spent for student body activities and not reimbursed by receipts, dues, etc. by your EPU's.

| Nation | Average $ .00 | Quality Quarter $ 1.35 | Top Tenth $ 3.74 |
|---|---|---|---|
| **Region** | | | |
| 1 | .25 | 1.55 | 3.15 |
| 2 | 1.30 | 3.00 | 5.03 |
| 3 | .00 | .18 | 1.36 |
| 4 | .00 | 1.68 | 9.10 |
| 5 | .00 | .16 | .72 |
| 6 | .00 | .00 | 1.14 |
| 7 | .52 | 3.36 | 5.56 |
| 8 | .46 | 2.49 | 5.05 |
| 9 | .00 | .00 | .82 |
| **Size** | | | |
| 1 | .00 | .83 | 1.69 |
| 2 | .00 | .49 | 1.63 |
| 3 | .00 | .68 | 3.79 |
| 4 | .00 | 1.55 | 4.04 |
| 5 | .00 | 1.56 | 4.59 |
| 6 | .00 | 1.93 | 4.58 |
| 7 | .00 | .95 | 3.50 |

**WHAT IS OUR DISTRICT SIZE?**

1—Over 25,000
2—12,001-25,000
3—6,001-12,000
4—3,001-6,000
5—1,201-3,000
6—601-1,200
7—300-600

*For help in using these charts, see article starting on page 82.*

# Is yours a 'quality' district?

**Even though your district's total expenditures equal those of the Quality Quarter, you may not have a quality educational program. Here is a look at the top 25% of the nation's school districts—and an analysis of their spending.**

■ ■ ■ Twenty-five percent of the nation's schools spend $370 or more per pupil for net current expenditures. We have chosen to call these schools the "Quality Quarter."

But do expenditures in excess of $370 automatically guarantee that yours is a "quality" school district? The answer is "no."

Net current expenditures per pupil is a good, but rough, measure of school quality. It tells how *much* a district is spending, but not *how* it is spending. To take an extreme case, one district qualified for the Quality Quarter because it spent nearly $80 per pupil for maintenance. In three other categories (instruction, administration, health services) this district was actually below the national average. So, although it qualified for the top quarter, it is doubtful if it is actually offering a quality educational program.

How do the Quality Quarter schools, in general, spend their money? The median among the Quality Quarter schools spent $419 per pupil for net current expenditures as compared to $304 for all schools in the United States.

The chart on the opposite page contrasts how a median district in the Quality Quarter distributes its funds and how a median district nationally spends its money. The first two columns show the actual amount involved. The next two show the percentage of net current expenditures spent in each category. The final column shows how much *extra* the Quality Quarter school spends in each category.

It's interesting to note, for example, that although the Quality Quarter districts spend considerably more on instruction than do the average districts ($314 as against $234), they devote a lesser percentage of their budget to this all-important item.

### More for everything

This means, obviously, that the Quality Quarter schools not only have more money available for the improvement of instruction in their schools; they can afford to devote a larger share of their funds to other aspects of the program. It is obvious from these charts that the Quality Quarter districts can hire better clerks, custodians and janitors, as well as teachers and administrators. And with far greater contributions

### Where they are

As might be expected, the Quality Quarter districts are not distributed evenly throughout the nation. As this chart shows, almost one-third of all Quality Quarter districts are in Region 2, and more than two-thirds can be found in Regions 2, 3 and 9.

| Region | Percentage of Quality Quarter districts |
|---|---|
| 1 | 7.9 |
| 2 | 33.1 |
| 3 | 18.1 |
| 4 | 8.5 |
| 5 | 1.4 |
| 6 | .1 |
| 7 | 2.1 |
| 8 | 9.9 |
| 9 | 18.9 |

## QUALITY QUARTER BOX SCORE

| | Quality Quarter Median | Nat'l Median | Quality Quarter % of NCE | Nat'l % of NCE | Amount of difference |
|---|---|---|---|---|---|
| **ADMINISTRATION** | **$ 16.75** | **$ 12.70** | **4.0%** | **4.2%** | **$ 4.05** |
| Professional salaries | 7.97 | 6.30 | 1.9 | 2.1 | 1.67 |
| Clerks salaries | 6.02 | 4.10 | 1.4 | 1.3 | 1.92 |
| Other expenditures | 2.76 | 2.30 | .7 | .8 | .46 |
| **INSTRUCTION** | **$314.00** | **$233.60** | **74.9%** | **76.9%** | **$ 80.40** |
| Classroom teachers salaries | 261.85 | 198.80 | 62.5 | 65.4 | 63.05 |
| Other professionals | 29.10 | 18.70 | 6.9 | 6.2 | 10.40 |
| Clerks salaries | 7.95 | 3.50 | 1.9 | 1.2 | 4.45 |
| Teaching materials | 12.63 | 8.80 | 3.0 | 2.9 | 3.83 |
| Other expenditures | 2.47 | 3.80 | .6 | 1.2 | —1.33 |
| **ATTENDANCE SERVICES** | **$ .47** | **$ .30** | **.1%** | **.1%** | **$ .17** |
| **HEALTH SERVICES** | **$ 4.93** | **$ 1.80** | **1.2%** | **.6%** | **$ 3.13** |
| Salaries | 4.16 | 1.30 | 1.0 | .4 | 2.86 |
| Other | .77 | .50 | .2 | .2 | .27 |
| **OPERATIONS** | **$ 45.32** | **$ 32.10** | **10.8%** | **10.5%** | **$ 13.22** |
| Salaries | 27.16 | 17.00 | 6.5 | 5.6 | 10.16 |
| Heat | 7.00 | 5.45 | 1.7 | 1.8 | 1.55 |
| Other utilities | 8.01 | 5.85 | 1.9 | 1.9 | 2.16 |
| Other expenditures | 3.15 | 3.80 | .7 | 1.2 | — .65 |
| **MAINTENANCE** | **$ 14.23** | **$ 11.60** | **3.4%** | **3.8%** | **$ 2.63** |
| Salaries | 5.79 | 3.40 | 1.4 | 1.1 | 2.39 |
| Other | 8.44 | 8.20 | 2.0 | 2.7 | .24 |
| **FIXED CHARGES** | **$ 21.71** | **$ 10.90** | **5.2%** | **3.6%** | **$ 10.81** |
| Retirement Fund | 14.71 | 6.70 | 3.5 | 2.2 | 8.01 |
| Other | 7.00 | 4.20 | 1.7 | 1.4 | 2.80 |
| **OTHER SERVICES** | **$ 1.47** | **$ .80** | **.4%** | **.3%** | **$ .67** |
| **TOTAL NET CURRENT EXPENDITURES** | **$418.88** | **$303.80** | **100.0%** | **100.0%** | **$115.08** |
| Transportation | 13.33 | 13.40 | 3.2 | 4.4 | $—.07 |
| Capital outlay | 12.02 | 8.39 | 2.9 | 2.8 | $ 3.63 |
| Debt Service | 56.00 | 31.76 | 13.4 | 10.5 | $24.24 |

***"If it's administrative leadership you want, you are going to have to pay in order to attract it, to hold it and to insure that it will continue."***

to retirement funds, these districts can probably also retain their personnel over a longer period of time.

These districts also make it worthwhile for their professional people to stay by giving them high salaries and lowering their pupil load. The median district in the Quality Quarter pays its professional administrators an average salary of $11,133, as opposed to the $9,440 paid by the national median district. Classroom teachers in the Quality Quarter schools earn almost $1,000 more per year than their compatriots in the average schools.

In terms of work load, the Quality Quarter districts ask their administrators to handle almost as many students as do the average schools. (.70 administrators per 1,000 students as against .65 in the average school.)

But when it comes to the instructional part of the program, the Quality Quarter districts hire 44.4 teachers per 1,000 students as opposed to 40 teachers per 1,000 pupils in the average schools. Moreover, while the average schools provide only 2.7 principals, assistant principals and other instructional supervisors, the median Quality Quarter districts provide 3.7 of these valuable people for every 1,000 students. As a matter of fact, better than 70% of the Quality Quarter schools exceed the national average in adequacy of instructional personnel other than classroom teachers.

### An analysis

Dr. George T. Brain, superintendent of schools in Baltimore and former superintendent in Bellevue, Wash., was asked by SCHOOL MANAGEMENT editors to analyze the Quality Quarter districts in terms of the CEI figures and to give some guidelines to help other schoolmen determine if they are in a "quality" district. The following is taken from a tape-recorded interview.

Dr. George T. Brain, Superintendent, Baltimore, Md.

**Q. Dr. Brain, if a superintendent or school board member sees that his district is spending at the national Quality Quarter level, can he be sure that his district is doing a quality job of education?**

BRAIN: No, not necessarily. It depends on what those expenditures are buying in terms of services for the educational program. If the expenditures are unbalanced, a district might be spending a great deal for items that contribute only indirectly to education and not enough for these directly affecting the educational program.

**Q. Is it important to a district in measuring the quality of its education to be spending at or near this Quality Quarter level?**

BRAIN: I think it's very important. The amount of money spent for education at this level certainly has an effect on the quality of the program. But we must look beyond total expenditures and examine distribution, too. Money should be spent for education according to a long-range balanced expenditure plan.

**Q. What would be the three or four most important factors of such a balanced expenditure program?**

BRAIN: These key factors revolve around personnel and money. To achieve quality education, wise planning is needed. One important factor would be administrative leadership. Another would be staff adequacy and its relationship to staff salaries. In other words, a district's ability to attract and hold top people. A third factor would be instructional expenditures, with a close, hard look at instructional aids and equipment. These would include supporting services such as clerical personnel and the people who work in special service fields assisting the teacher, as well as mechanical aids and equipment. A final important element in a balanced expenditure program would be the allowance

made for research and experimentation. A school district should seek ways to improve school quality through continuous experimentation.

**Q. To get into the Quality Quarter today, a district has to be spending about $419 per pupil. Can it be fairly certain that it's doing a quality job if it's spending $350 of that in instruction?**

BRAIN: Again, not necessarily. There are budget classifications other than instruction that are also important to get quality education. For example, the cost of television is often classified under operation in the same manner as telephone charges. Television is an important instructional device. It contributes to school quality. Yet in many districts this does not appear as an instructional cost.

**Q. Yet, no matter where the television cost appears in the budget, it is still an instructional expenditure. Suppose a district were to include items such as this one under instructional expenditure. Then would this $350 be enough to guarantee quality education?**

BRAIN: No, it wouldn't. Again, there are elements to consider that do not appear under specific areas of instruction. I am thinking now of curriculum leadership. In some instances, such leadership would be identified under central administration. Other times it would appear under classifications that provide service to instruction though they might not be listed specifically in the instruction portion of the budget.

**Q. The average school in the United States spends approximately 70% of its budget on instruction. Would it be necessary for a school that is spending more dollars to maintain this percentage of instructional expenditure?**

BRAIN: No, not for each and every year. The percentage devoted to instruction would depend upon the district's long-range educational program. Sometimes it may be necessary to emphasize one category over another, causing some variations in the district's spending pattern from one year to another. By and large, though, the major emphasis in any budget remains in the instructional section. But spending 70% of your budget on instruction each and every year would not in and of itself guarantee quality education.

In other words, it's all right to have varied emphasis in the budget from year to year provided you know exactly why these differences exist. In a given budget year, you may want to spend a little extra money on plant maintenance to renovate a badly deteriorating school building. You're actually doing more than just preserving the structure. A freshly painted classroom with new lighting fixtures raises pupil and teacher morale. The money you spend on repairs and reconditioning won't appear under instructional expenditures. Yet these same dollars affect the quality of instruction in the school.

In a subsequent year, you may shift your emphasis from building improvement to some other area—perhaps improving your administrative staff. Here again, instruction may benefit even though the emphasis on it is not apparent from a reading of the budget. You must vary your emphasis in expenditures according to some definite plan of improvement.

**Q. What are some of the things school officials might examine to determine whether or not they have a quality program?**

BRAIN: They would have to look first at the level of their expenditures and next at their pattern of distribution. How much have they spent on administration, teachers' salaries, educational supplies? They may find they have been overstaffing

***"You must vary your emphasis in expenditures according to a definite plan."***

their central office to the detriment of the instructional staff at the building level. Adding an additional assistant at the building level may bring greater benefits in terms of instructional improvement. Another important area would be that of available instructional materials—libraries, reference materials, instructional resources of all kinds. Teachers cannot be effective without proper tools. Of course, the teacher-pupil ratio must be considered, too. Most schools presently in the Quality Quarter have a good pupil-teacher ratio.

Salary level is always an important part of such an evaluation. Good salaries help attract the people that are needed to do the instructional job. But salary, in itself, is only one item in evaluating school quality.

**Q. What if a district were paying salaries that were lower than average while their expenditures—even for instruction—were in the Quality Quarter? It might be that they had a greater number of teachers. What would this mean to someone trying to judge the quality of that district's education?**

BRAIN: This could be a danger signal. On the other hand, the amount being paid to teachers alone is not the only index of quality. If a district wants top flight administrators and teachers it will have to pay high salaries in order to attract and hold them.

So both adequacy and salary level must be considered very carefully. Merely adding personnel doesn't, by itself, guarantee quality education. How persons are deployed in the system, and what use is made of their creative talents, is important also.

**Q. You have been a superintendent in a small and, presently, in a large district. Would you say that the effort a community makes effects your ability to carry out a job?**

BRAIN: Absolutely. Without community support, the administrator of a school program has all he can do to maintain the status quo, let alone make any forward progress. With community backing, he is able to set up a timetable of educational improvements. He can introduce new teaching techniques, reorganize learning activities when needed and specifically plan what instructional areas are to receive primary emphasis in a given year. He knows that the community will back such plans by taxing itself to support them.

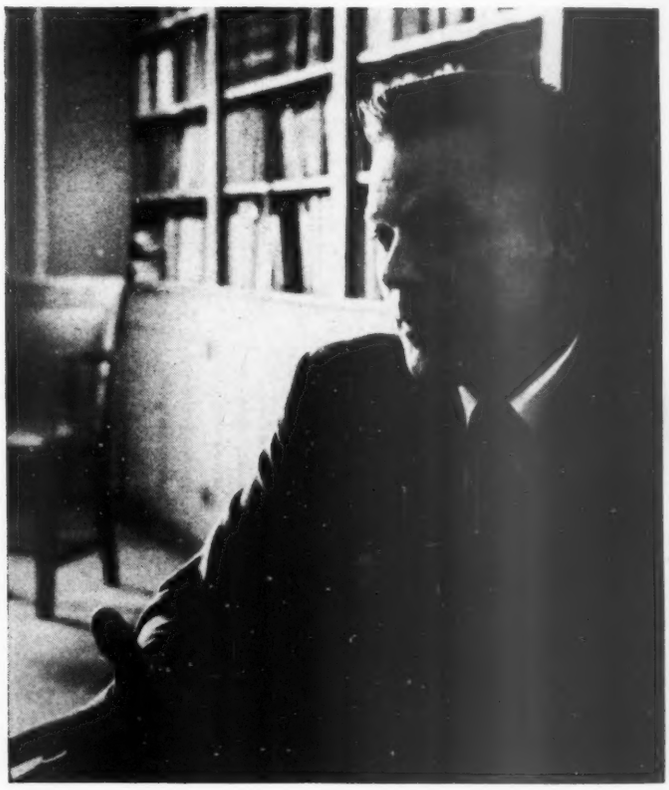
**Q. Can a superintendent, working with limited funds—but with substantial community effort behind him—carry out a program superior to those of some schools that are not expending as much effort?**

BRAIN: Yes, but not as often as a superintendent whose community has made available all the funds needed to carry out a superior program. He has to provide exceptionally superior leadership. But remember, superintendents are not miracle workers. One man may organize, coordinate, administer and direct. But he is working in collaboration with members of the community and members of the school staff. By working together—even without sufficient funds—he can contrive to up-grade the quality of the school program. However, such districts are rare. If the money isn't there, it's pretty difficult to keep a school program at a high quality level.

**Q. Dr. Brain, suppose that a community makes a great local effort for education but finds that funds are still limited. How can such a community get the help it needs to achieve the kind of education it obviously wants?**

BRAIN: This is where the state and federal governments come into the picture. A state should make it possible for any community to get quality education. When a local community has made a great effort to support education, the state could supply sufficient funds. Since some states are poorer than others, perhaps some additional aid might be needed at the national level for the schools. **End**

***"Without community support, the administrator has all he can do to maintain the status quo."***



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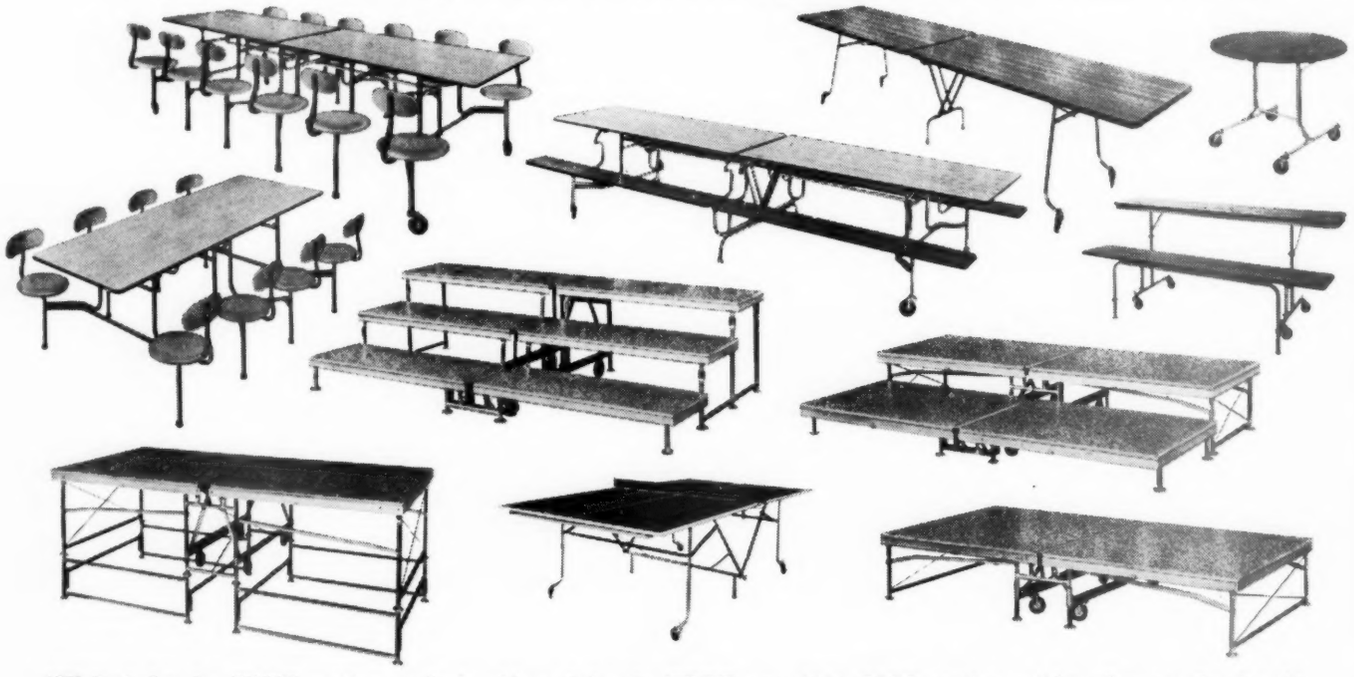

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# Should your district be in the quality quarter?

**An experienced superintendent, and his administrative assistant, assess their district's expenditures and tell what would happen if they had to spend less—or could spend more—than they currently are.**

O. E. HILL

S. W. DAVIDSON

■ ■ ■ No reasonable man will deny that there is a correlation between price and quality. Few question that a Rolls Royce is better than a motor scooter or that a Dior original is superior to a dress found in a bargain basement. But the scooter will get you where you want to go, and the bargain basement dress has proved perfectly satisfactory to millions of women.

The real question is one of degree. You can drive a scooter but you'll be more comfortable in a Rolls Royce. The Dior original will probably be far more flattering than the bargain garment.

Much of the same reasoning can be applied to education. There is no question that a district in the Top Tenth can afford to buy better schools, better teachers, better furniture and better teaching aides, than a district whose spending patterns leave it in the lowest tenth. But

The interview reported in this article was conducted just a few weeks before the sudden death of O. E. Hill. Dr. Hill, who had been superintendent of the Cleveland Heights district since 1951, passed away on October 27, 1960. At a special meeting, the Cleveland Heights Board of Education made the following statement:

"His life was devoted wholeheartedly to the educational betterment of . . . all communities in which he had labored. His outstanding administrative leadership and keen interest was highly respected by his fellow educators throughout the country. His passing has left the people of his community solemn in the knowledge that a great loss has been sustained."

both districts *can* put their students in school; both *can* put teachers in the classrooms; and both *can* give their students an "education." The question of how good the schools, the teachers and the education will be, has not been answered.

Expenditures per pupil—to a point at least—are a good measure of the quality of education a district is providing. The CEI figures on the preceding pages can serve as a partial measure of the quality of your district's schools.

You can find out, for example, whether your district is spending enough to buy a Rolls Royce education, or whether your students are being confined to motor scooters.

But there is a lot of ground between these extremes. Ten percent of the schools in the United States are spending less than $187 per EPU for net current expenditures this year. They are certainly in the motor scooter class. They may get where they want to go, but it will be a long, rough trip with few modern conveniences.

At the other end of the scale, 10% of the nation's districts are spending at least $440 per EPU for net current expenditures. On this end, however, it's a little harder to distinguish between a luxurious education and one that is just better than average. There are, after all, a number of districts (about 1% of the national total), that are spending $700 or more per EPU for net current expenditures.

Just what effect does a district's spending have on the quality of the education it offers? To get answers to this question, a SCHOOL MANAGEMENT editor went to Cleveland Heights, Ohio, to interview Superintendent O. E. Hill and Administrative Assistant S. W. Davidson.

Cleveland Heights is *not* an average district. A suburb of Cleveland, it is located in a high income, high expenditure area. Its net current expenditures, during the last three years, have placed it near the top 10% of the school districts in the United States. On the other hand, the Cleveland Heights schools spend just slightly more than the average districts in their immediate area and considerably less than some of their neighbors.

The Cleveland Heights schools have 7,077 elementary and 5,792 secondary pupils, a total of 14,607 expenditure pupil units. There are nine professionals on the administrative staff and 638 principals and teachers.

Dr. Hill and Dr. Davidson were asked to analyze their district in terms of its present expenditure level and in terms of what would have to be eliminated from the district if their spending were curtailed to the point where the district was just "average." Administration, instruction, health services, and maintenance and operation—accounting for better than 90% of net current expenditures—were the areas considered. Figures used were for the 1959-60 school year.

Their comments on what this would mean to education in the Cleveland Heights school system, are taken from the tape-recorded interview.

---

S. W. DAVIDSON
*Administrative assistant*

***"You don't make progress by being satisfied with mediocrity. In our opinion, being average is only being mediocre."***

***Q Dr. Hill, we want to examine the expenditures of the Cleveland Heights School District to see what you are getting for the money you are spending above the average school district in the United States. For example, you spent about $41,000 more on administration than an average district your size. What would you have to do in your school district to cut $41,000 out of your administrative budget?***

HILL: First of all, it is this supplementary money that we believe has given us the leadership and the organization to provide a quality education. It would be one of the last things that we, or our community, would want to cut. But in case of necessity, the only practical approach in terms of administration is to cut personnel. It's not a desirable direction but there is no other approach as we see it. Our budget for things other than personnel is practically nil.

DAVIDSON: Ours is a unit administration from the top down. The superintendent is responsible to the board of education and the community for the entire program. There are a number of assistants on his staff, including myself. Our jobs are essential in the type of organization we have. I suppose some of us could handle more than one of these tasks, but it would certainly cut down on our efficiency.

**Q.** According to your budget, your district spent $47,000 in salaries for assistant superintendents. To get down to average, you must cu

$41,000 out of your administrative budget. What would happen if you had only $6,000 to spend on administrative assistants?

HILL: That's a difficult thing to answer. It would mean combining the functions of these different departments under fewer people. We would hesitate very much to decrease any of these classifications. For example, the director of pupil personnel services might go. But he directs the activities of 27 people—psychologists, attendance workers, and that type of personnel. The staff is under the instruction department; but the top leadership, which is very important, comes under administration.

**Q.** Couldn't you, as superintendent, really direct these 27 people? After all, many superintendents are doing it.

HILL: I could. But the more routine work that is put into the superintendent's hands, the less time he will have to do the important things for which he was hired, and which result in a quality education.

**Q.** What activities wouldn't you be able to carry out if you had to assume some of the more routine duties now handled by your assistants?

HILL: I would have less contact, and less opportunity for leadership, in the schools themselves. If I were worrying about attendance records, getting bills paid and other matters of that sort, I would certainly have much less time to think about the instructional program in this district.

**Q.** In other words, this would make you a less efficient superintendent?

HILL: There's no question about that. To eliminate this amount of money from administration would actually be wasteful. It seems to me that the quality of our educational program has gone up far beyond the proportionate additional expenditures.

**Q.** Let's look at this the other way around for a moment. Your district was spending $15.05 per expenditure pupil unit for administration. One quarter of the districts in the United States were spending $18.86 per EPU on administration. This would mean an extra $55,000 added to your administrative budget. What could you do with this kind of money? Would it just be adding frills to your administration?

HILL: Some might call them frills, but there are many things that we feel we could do with that kind of money that would add a real service to our community. For example, in our own school system this past year the board of education appropriated about $12,000 for a summer study of large group instruction, team teaching and other methods to lessen the load of teachers. If we had the extra $55,000, it would certainly make sense to put some of our people to work through the year exclusively on the problem of improving instruction through the use of new techniques.

DAVIDSON: If I were given the opportunity to add $55,000 to the expenditures for administration, the first thing I would do would be to

**HOW CLEVELAND HEIGHTS COMPARES WITH THE NATION**

| Item | U.S. Average | Cleveland Heights | Total Difference* |
|---|---|---|---|
| **Administration** | $ 12.20 | $ 15.05 | $ 41,630 |
| Professional Salaries | 6.41 | 5.98 | —6,281 |
| Clerical Salaries | 3.66 | 5.87 | 32,281 |
| **Instruction** | 226.74 | 289.51 | 916,881 |
| Professional Salaries | 210.31 | 264.55 | 792,284 |
| Clerical Salaries | 3.36 | 8.81 | 79,608 |
| Teaching Materials | 8.19 | 15.51 | 106,923 |
| **Health** | 1.83 | 2.81 | 14,315 |
| Health Salaries | 1.22 | 2.63 | 20,596 |
| **Operation** | 29.78 | 33.22 | 50,248 |
| Salaries | 16.00 | 12.36 | —53,169 |
| Heat | 4.88 | 5.40 | 7,596 |
| Other Utilities | 5.19 | 9.62 | 64,709 |
| **Maintenance** | 10.67 | 32.11 | 313,174 |
| Salaries | 3.05 | 20.00 | 247,589 |
| **Net Current Expenditures** | $292.00 | $406.00 | $1,665,198 |

** The total difference is obtained by subtracting the national average expenditure per pupil from the Cleveland Heights expenditure per pupil and multiplying the results by 14,607—the number of expenditure pupil units in the Cleveland Heights school district. For example, under Administration, $12.20 (The U.S. Average) subtracted from $15.05 (The Cleveland Heights expenditures) leaves $2.85 difference. This amount, multiplied by 14,607, equals $41,630.*

**ORVILLE E. HILL**
*Superintendent of schools*

***"We're not even satisfied to be in the Quality Quarter. We think we must be in the Top Tenth to do a really good job."***

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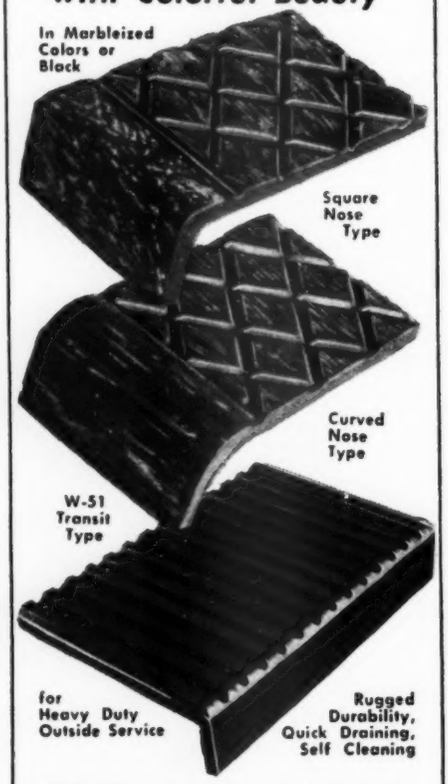
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spend some money on the mechanization of our office equipment. I'd get some equipment in here and some experts to run it. That wouldn't be a continuing expense, but if I had $55,000 this year I'd spend about $20,000 of it on that kind of equipment. In the long run, it wouldn't add that much to the annual budget.

**Q.** Would there be any advantage to using this $55,000 to raise salaries?

HILL: For the top administrators here, the salaries are low. I am not concerned about the present personnel so much, but if we were to raise these salaries it would raise the standards for the particular job. The job is worth so much, and if you have salaries that are equal to the job you will attract better people. Many of the people on this staff are getting near retirement age. If the salary levels were raised, we'd be able to attract the type of leadership here that this community ought to have.

***Q Let's move into the field of instruction. Your district was spending approximately $290 per expenditure pupil unit for all instruction. The average schools in the United States, during the same period, were spending just $227 per student. This means that you're spending almost $1 million more than the average school of your size on instruction alone. What would it mean to this district if you had to eliminate this huge sum?***

HILL: First, remember that the purpose of the public school is to instruct. To take $1 million out of that part of the program would be to take the heart out of our schools. We are in a high salary area so that it is doubtful if we would be able to cut salaries. If we had to cut down, it's the opinion of our staff that we would do the cutting by increasing class size. The pupil teacher ratio is about 24 to one now.

**Q.** How much are you spending on instruction salaries?

HILL: We are spending almost $3.5 million for teachers, principals and supervisors.

**Q.** You would have to decrease salary payments by almost a third to cut $1 million out of instruction. This would mean raising the pupil-teacher ratio to about 32 to one. What would this do to your educational program?

HILL: It would be harmful, but we wouldn't go quite that far. For example, we might increase the teacher load in terms of the number of classes they are teaching—English teachers would handle an extra group a day. Or we might extend the day in some way so that we could have the value of these teachers over a longer period of time.

DAVIDSON: Of course, the whole $1 million wouldn't come out of that. We could save something on teaching materials. We couldn't save anywhere near enough, but we could save some because we have been very liberal in providing the tools for the job—equipment and books.

**Q.** What teaching materials would you eliminate?

DAVIDSON: We'd simply have to reduce the science equipment budget. And we could cut our educational supplies 10 or 15%. We would use textbooks six years instead of five. Things of that nature.

HILL: Even then, we would have gotten very little out of the budget. And look what that very little would do to our program. Instead of having every biology student work with a microscope, we might have a demonstration program. Instead of giving each student a textbook, we might have some of them share.

***Q The average school your size is spending $1 million less on instructional costs than you are. Can it carry on an adequate instructional program?***

HILL: No, I don't think it can. A million dollars will cut sharply into any educational program. Of course, it depends to some extent on the educational level of the community. More than 80% of our stu-

dents go on to college. We probably provide a more complete science program than many districts would consider necessary. On the other hand, we don't have very much of a vocational program, and that is expensive.

**Q.** In other words, a school operating at the average level is simply unable to provide a quality education?

HILL: That's my judgement.

**Q.** Even the Quality Quarter districts in the United States are spending less than Cleveland Heights for instruction. But your district is not yet in the top 10%. To get into the Top Tenth, you would have to spend another $150,000 on instruction. Would this amount be of value to your program?

HILL: We're probably going to raise our instructional budget by almost that amount by introducing a new salary schedule and putting language laboratories into our new high school. We do not consider these frills. If we could spend that extra $150,000, it would certainly improve our program.

**Q.** You mention raising instructional salaries. How much are you paying classroom teachers at the present time?

DAVIDSON: The instructional staff averages about $6,245 per person.

**Q.** The average school in the United States was spending considerably less than that. What would happen if you simply cut down to the $5,114 per teacher spent by the average district. That would cut more than $720,000 out of the instructional budget.

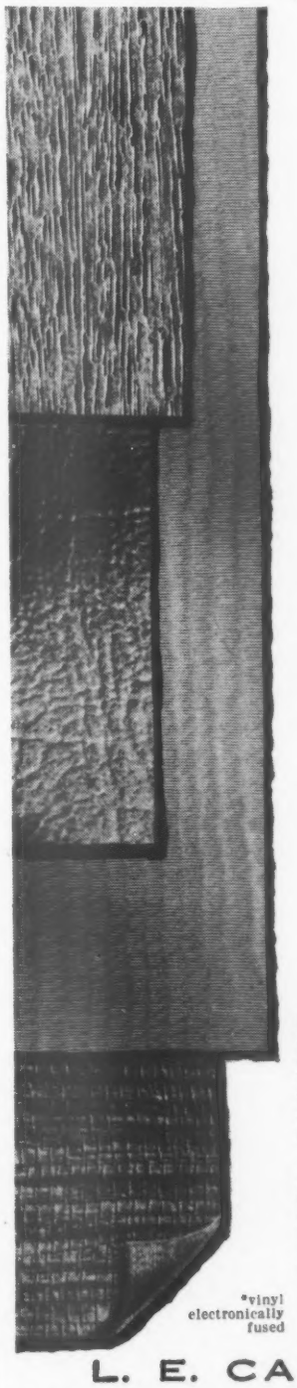
HILL: That's one of the last things we'd do. We just wouldn't get the teachers. Quality education is based on good teaching and we've got to be competitive to get good teachers.

**Q.** Your district happens to be in a high income area. Suppose you were in another area where salaries were lower. Would you be able to lower your salary schedule then?

HILL: Let me put it to you this way. We don't recruit teachers from just around this area. We recruit nationally. Now, the cost of living in the Cleveland area is certainly higher than in some other areas of the country. But food costs are about the same. A car costs as much. Insurance, fuel and power, clothing—all of these things are pretty much the same. Rent here is higher. So perhaps a differential of $500 a year between this area and —let's say—Kentucky would be in order. But if a district in Kentucky is paying more than $500 under our scale, we are going to be able to attract its best teachers with our higher salaries.

DAVIDSON: To really get a good teaching staff, a district cannot afford to look at the schools around it and then say "with a $4,000 salary scale we can do better because we can get the best teachers in our area." It may be getting the best teachers who want to stay in the area, but that district is not getting the best teachers. The best teachers are going to leave the area and go to places where they can make more money.

HILL: Yes, that's a very important point. It's easy to say that our district is in a low income area so we don't have to pay as much for salaries. But unless that district is pay-

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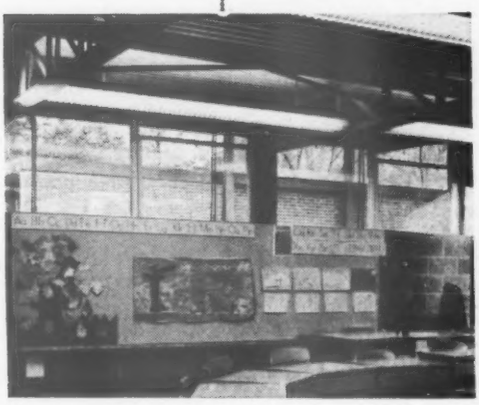

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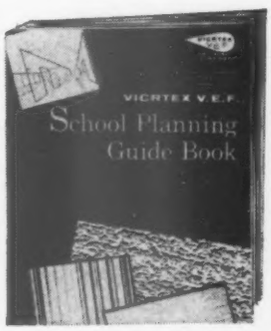


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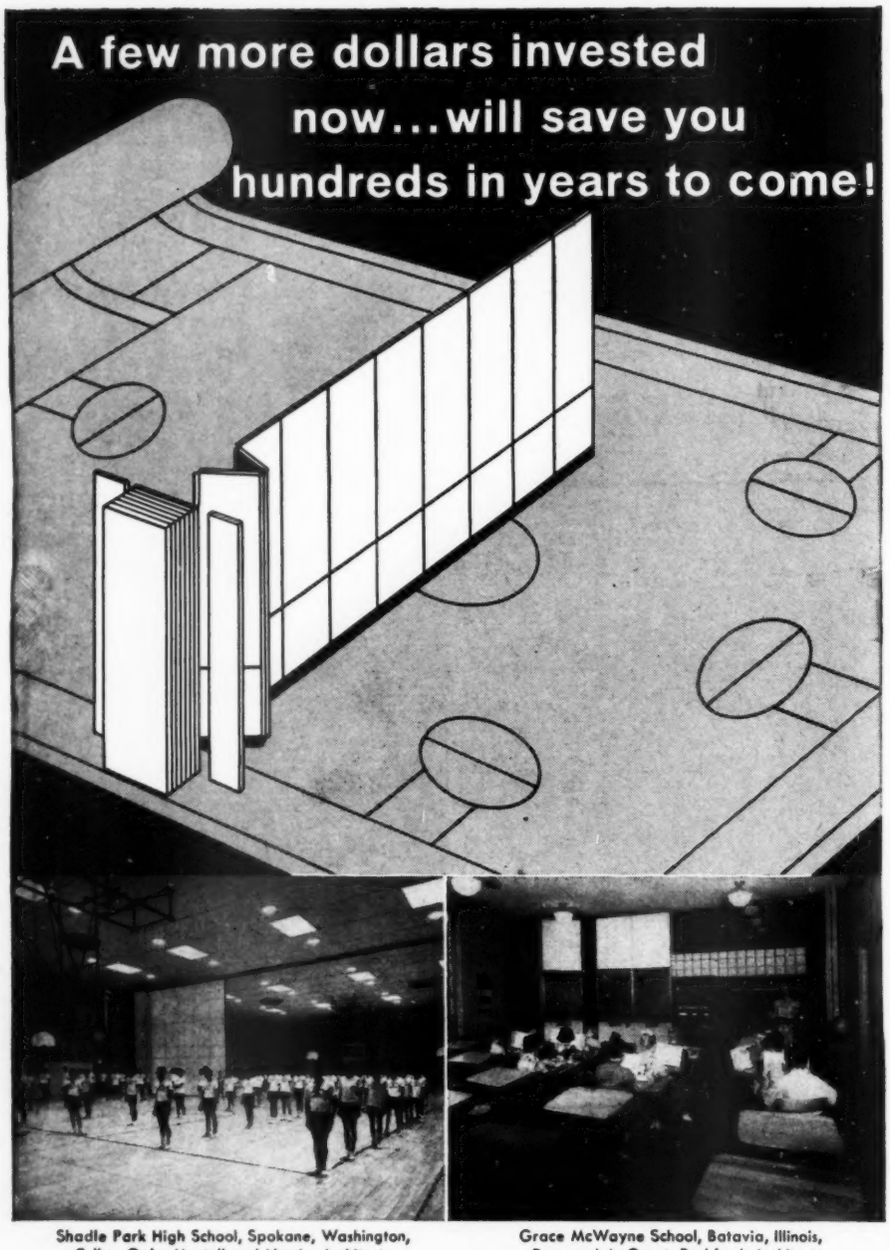


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ing salaries that are comparable with the best salaries in the whole nation, it is going to lose its teachers. We recruit good teachers from these low-income, low-pay areas every year.

**Q.** Your district spent more than $115,000 for instructional clerks and secretaries. This is considerably more than the average district. Isn't this an expense that could be cut out?

HILL: It could be cut out, but it would definitely be at the expense of a quality education. It would make it necessary for teachers to do a lot of routine things which are certainly less important than their primary job. It's cheaper to get this kind of routine clerical service done by less expensive people than to have teachers give up some of their teaching time.

DAVIDSON: Every principal in our school system has at least one secretary. We don't ask our principals to prepare reports and do other routine work. Any time a principal must spend in routine matters that a clerk is capable—and in many cases more capable—of doing, he is using time that he should be spending as instructional leader in his school. We don't hire our principals to be clerks. We hire them to bring leadership to their schools. The small investment involved in hiring clerks to give them an opportunity to do their real job, is an investment that we would not want to cut.

***Q Let's move on to health services. Your district was spending $2.81 per expenditure pupil unit. The averge school in the United States was spending $1.83. Is this an area where you might cut down? Do you feel that schools should be involved in health services at all?***

HILL: We feel that it is the school's business because good education and poor health together are a poor situation. We have no way of telling what kind of services parents might purchase for their youngsters if the school didn't take the leadership in the matter. We feel that the

money we're spending is well spent in terms of general checkups and in terms of giving direction to students and to parents concerning their children's health.

**Q.** Then your health people do make a contribution to the program of your schools?

HILL: Very definitely.

**Q.** Your district is spending about $20,000 less per year than a Quality Quarter district your size. Would this $20,000 added to your health services program be of value?

HILL: It isn't very often that a superintendent would say that an extra $20,000 would be excess, but in my judgement we now have ample services. We could undoubtedly add to what we're doing, but we really don't see the need for it.

**Q.** Might the extra amount be added to increase salaries?

HILL: Again, I don't think we would appreciably increase the service we are performing. In this particular area, we feel that we are spending enough.

***Q Your district spent approximately $65 per expenditure pupil unit on maintenance and operation. The average school in the United States spent a little more than $40 a year in these areas. The difference amounts to approximately $363,000. If you had to cut that amount out of your budget, how would you do it?***

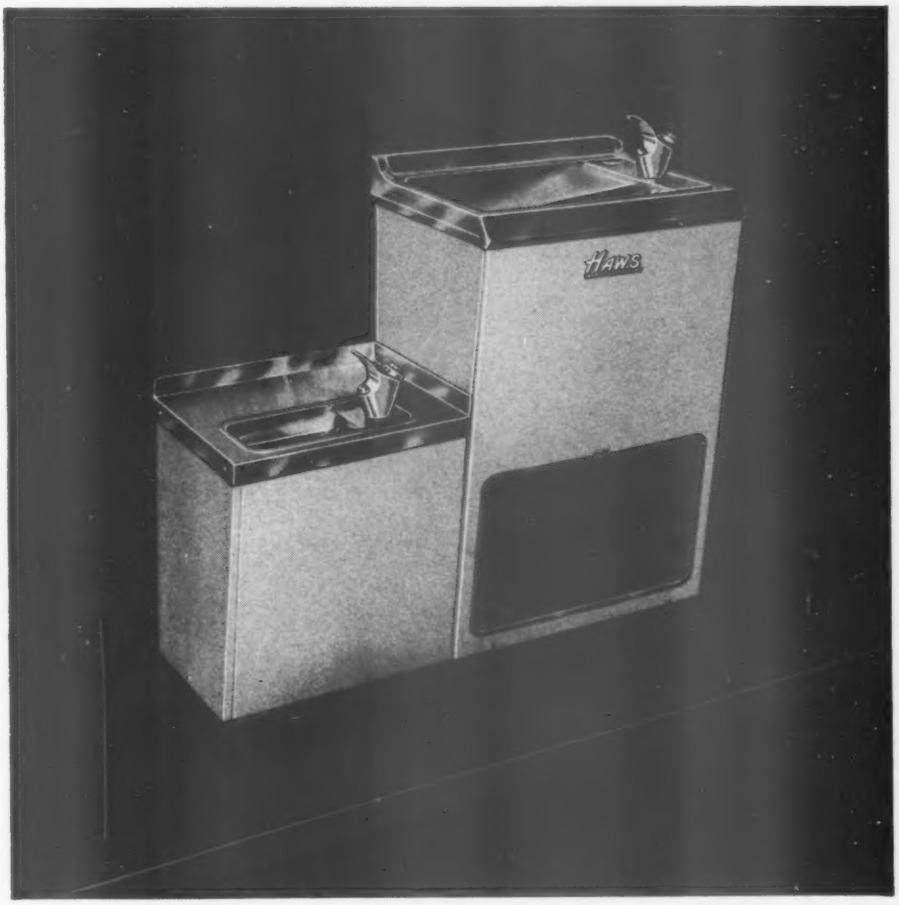
HILL: In the first place you could not cut the fuel cost and stay comfortable. It would probably have to come from a decrease in the number of custodians. That's the only approach that I can see. But we've learned that when we neglect maintenance—whether it's an attempt to save money or pure neglect—in the long run our costs go up. That is, if we can't afford to paint a building, and let it ride five or six years, then we have a major repair cost in order to bring that building up to standard.

DAVIDSON: Operations and maintenance is an area where cutting down is perhaps tempting on the surface, but bad in the long run.

**Q.** Does the maintenance ot a school affect its educational program? Suppose it were cleaned only once every two days, would this affect your program?

HILL: It's always difficult to measure psychological effects on teachers and students, but I believe that it very definitely would affect our program. One of the purposes of education is to teach youngsters neatness and cleanliness. A good job of maintaining our schools is an indirect method of educating youngsters.

DAVIDSON: I don't see any place where we could cut very much in the operation or maintenance programs except in repairs of buildings and the materials for maintenance. Far from being overstaffed, I know that we're understaffed. If we don't keep our school buildings attractive in appearance, the property values in the whole community suffer. I don't see how we could cut very much from maintenance and operations. We might be able to cut a few thousand dollars by skimping on this and that, but we certainly

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couldn't cut $363,000 and still maintain an adequate program.

**Q.** Are you perhaps paying your custodians more than you need to?

HILL: No. As it is, we're losing custodians to industry. Our custodians are operating an expensive plant. They must be people of top caliber.

**Q.** Dr. Hill, we have talked now about administration, instruction, health, and maintenance and operation. These items account for more than 90% of your net current expenditures. Let's look at your expenditure pattern as a whole. Your district spent $406 per expenditure pupil unit. An average district your size would have been spending more than $1.5 million less per year. Could you operate a good school system at that level?

HILL: Within the economy of this community? No.

**Q.** Could you operate a good school system at that level in any community?

HILL: I don't know how it could be done. We're emphasizing quality education. That requires a reasonable pupil-teacher ratio. Teachers' salaries must be high enough to attract good staff members. If you could hire good teachers for a $1,000 less than we are spending, that would certainly cut costs.

**Q.** Can a district hire teachers of top caliber for that much less?

HILL: Not in this area, and I don't think they could any place else.

**Q.** Dr. Hill, your district is lucky. Your schools are being supported at well above the average expenditure level. But most superintendents cannot look for that kind of support. If a superintendent or school board member is looking at the current Cost of Education Index reports and finds that his school is average, can he be satisfied?

HILL: It wouldn't be satisfactory to me, personally, as a superintendent of schools. Nor would it be satisfactory to the community of Cleveland Heights. We're not even satisfied to be in the Quality Quarter. We think our schools must be in the Top Tenth to do a really good job.

DAVIDSON: I think the answer to this is that you don't make progress by being satisfied with mediocrity. In our opinion, being average is only being mediocre. **End**

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# A statistical look at the Cost of Education Index

By DR. ORLANDO F. FURNO

**Here, for the experts, is an explanation of the criteria used in developing the Cost of Education Index, a discussion of its history and uses, and formulas for calculating its statistical validity.**

Dr. Furno, under whose direction the CEI reports were prepared, is Director of Research, Baltimore Public Schools.

■ ■ ■ Schools have experienced vast changes in the past six decades. In 1900, public elementary and secondary schools enrolled 15.5 million pupils and had total school expenditures of almost $215 million, about $14 per enrolled pupil. By 1960, enrollments more than doubled to an estimated 36 million while school expenditures skyrocketed 74 times to almost $15 billion, or $443 per enrolled pupil.

### Factors affecting school costs

Many factors have influenced these increasing school costs. Six in particular provide the reasons why schools cost considerably more today than they did a few years or decades ago. They are:

1. Population increase
2. Inflation
3. Educational betterment
4. Competition for competent personnel
5. Competition for funds
6. School district organization

All signs indicate that school costs will continue to increase in the future and at a greater rate than they have in the past. As these costs go up, so might the dander of citizens required to foot the bill. The most pressing problem school boards and school administrators will have to face in the years ahead will be tied directly to costs: *How can "educational productivity" be increased so that the same number of dollars will get more and better quality education.* This is one of the important reasons for the mounting need to develop a valid yardstick for the comparison of school costs.

### Need for CEI

The need for the development and interpretation of school cost data and indexes may be highlighted by the tremendous number of requests for information. These requests are originated by federal, state, local and Congressional officials, as well as by school and lay organizations.

Unfortunately, the existing data makes for a picture of conflict and confusion on comparative school plant costs. The pertinent informa-

*continued on page 144*

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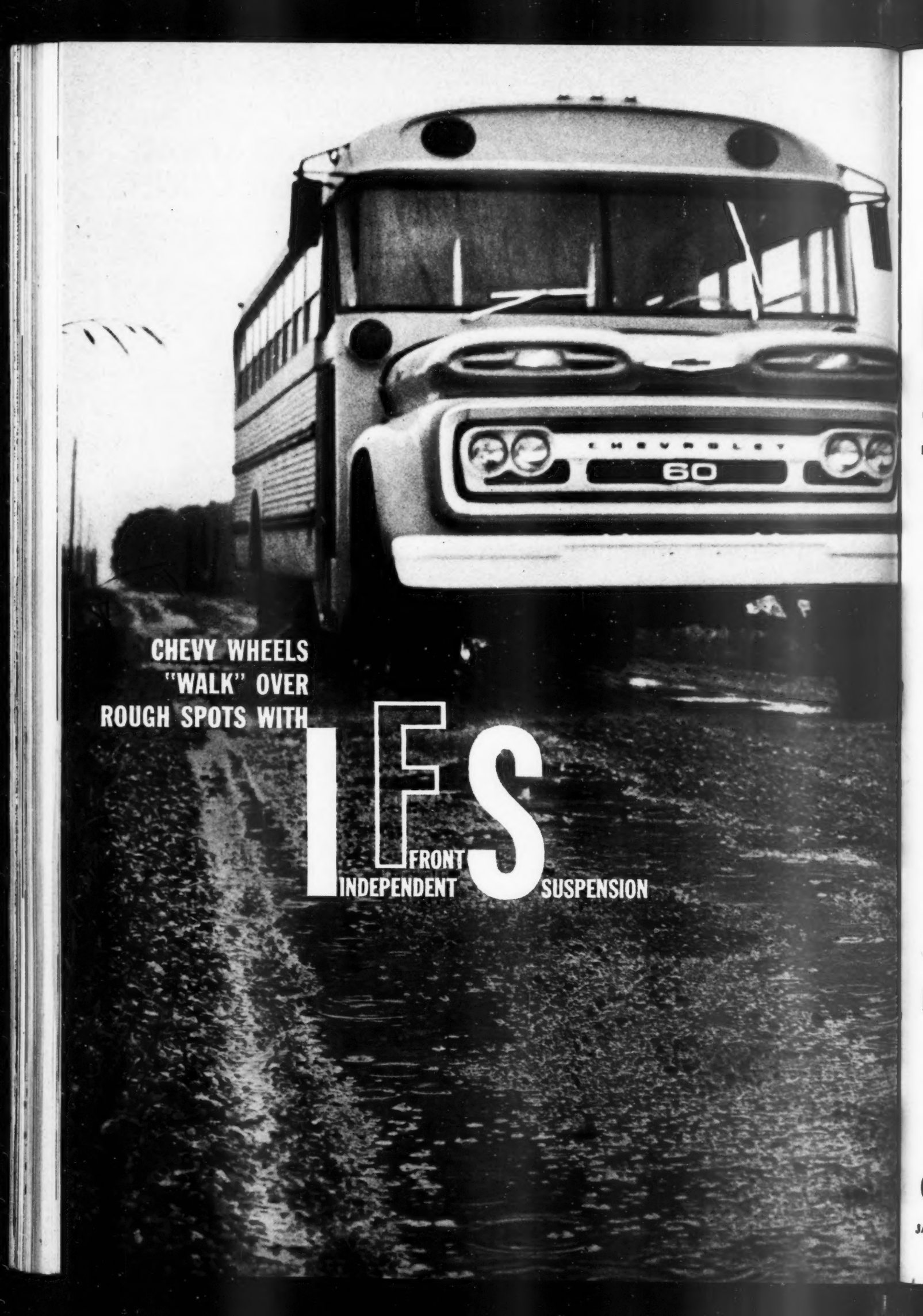
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60

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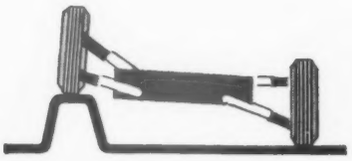
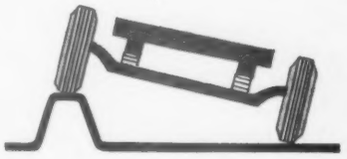


"Walking wheels" boost bus performance. In Chevy, each front wheel, suspended independently of the other, is free to step cleanly over bumps (see left). Each works smoothly to reduce objectionable jolts so characteristic with I-beam axle design (right). With special variable-rate rear springs, these buses provide added safety, lower maintenance—a brand of performance you get only from Chevrolet.



## CHEVROLET FOR '61: SCHOOL TRANSPORTATION AT ITS BEST!

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## A valid Cost of Education Index must have practicability, availability,

tion needed to evaluate educational programs and school buildings in terms of cost is not readily available. To this extent, the conflicting information, now available, results in a great amount of wasted effort by local officials, state legislatures, and Congress in attempting to develop sound patterns of school support and plans for school construction.

### Uses for CEI

Clearly, the development of valid cost of education indexes will have profound implications for the efficient operation of schools, and for the ultimate enhancement of school quality.

Presently, it appears that cost of education indexes can serve the following useful purposes:

*Measuring the purchasing power of the educationl dollar over the years.*

*Evaluating trends in revenues and expenditures for education.*

*Obtaining greater educational returns for each dollar of school expenditure, i.e. increasing educational productivity.*

*Helping local, state, and federal officials develop sound fiscal policies for the improvement of school quality.*

*Providing for the automatic adjustment of a state's foundation program to offset the deteriorating effects of inflation upon school quality.*

*Yielding invaluable information for the sale of bond issues at the most propitious times.*

We may presume that other important uses might also be found for valid cost of education indexes, such as guides for planning local school budgets that must deal with the future commitment of public funds.

### Need is not new

As long ago as 1893, a U. S. Senate Committee on Finance employed Dr. Roland Faulkner to construct an index number for teachers' salaries. Almost three decades later, in the early '20's, both Leonard P. Ayres in his "An Index Number for State School Systems," and Randolph Burgess in his "Trends of School Costs," computed index numbers. Neither Ayres nor Burgess referred to his index numbers as a cost of education index. However, in 1938, the National Education Association's Research Bureau paralleled Burgess' method to compute a cost of education index in the study which it made, "Why Schools Cost More."

In the late '40's, Dr. Paul R. Mort succeeded in getting the New York State Educational Conference Board to support a pilot study on a cost of education index. Under Mort's direction, Lorne Woollatt developed a cost of education index for New York State.

One decade later, in 1958, Woollatt developed a cost of education index for 18 large cities with populations over 500,000. Yet a truly National Cost of Education Index still needed to be developed.

SCHOOL MANAGEMENT, at the suggestion, and under the guidance, of this writer, proceeded to underwrite the great costs involved in doing the research for a series of pilot "cost of education index" studies.

### Developing a valid CEI

The construction of a National Cost of Education Index should be evaluated in light of at least six criteria. These are:

**1. Practicability.** The time and the money required to produce and maintain the index should be reasonable.

**2. Availability of data.** Any data to be used in the index should be easily and readily obtainable.

**3. Objectivity.** All data entering into the index should be uniform, accurate, and objective so that no matter who calculates the index, he will obtain the one correct answer.

**4. Simplicity.** The index should be constructed in the simplest terms consistent with validity. Most persons should be able to understand and to calculate the index.

**5. Flexibility.** Since the index would represent all school districts but not necessarily a particular district or group of districts, it must be so flexible that regional, state, and local district data could be substituted for national components.

**6. Standardization.** Constructing a cost of education index requires following the cost history of educational goods and services that are relatively constant in amount and quality. The board of education may be considered as the purchaser of an "educational market basket," which contains such things as the services of classroom teachers, guidance workers, administrators, custodians, and clerks, and goods such as instructional materials and school equipment. The standardization criterion does not imply the setting of any standards for quality: it is concerned only with the maintenance of a market basket in which the amount and quality of educational goods and services remain


About the Cost of Education Index

The School Management

cei

## simplicity, objectivity, flexibility and standardization

relatively constant over a period of time.

In light of these six criteria, we were confronted with a series of questions which weighed heavily upon all criteria but particularly upon the criterion of practicability.

*How could we identify the specific items on current operating and school plant costs which should be collected?*

*How should these cost items be defined so that realistic school cost units of measurement could be included?*

*How could the specific cost variables be delimited so that the million and one cost variables whose contributions were negligible, could be eliminated as separate entities?*

*How should the school districts be selected?*

*How should the cost and pupil data be collected?*

*How should the factors, to be used to weight the various cost items to be included in the component indexes, be identified?*

*How could the factors, to be used to measure the educational goods and services purchased (school quality market basket), be identified and kept current?*

*What mathematical methods should be used to combine the various sub-component cost indexes?*

*How could we validate the sub-component cost of education indexes through tests and try-outs?*

*What provisions should be made for the continuous collection, analysis, and promulgation of the necessary school cost data?*

We recognized at the outset that we could not make a census of all school districts nor could we request of them school expenditure data on a voucher basis. The resultant costs would have been prohibitive on two counts: money needed to collect the data, and the money required to edit, process and analyze the data. We did not have unlimited quantities of time and money. Our costs had to be weighed. Thus, the criterion of practicability, which contains within its concept the principles of economy and prudence, came to the fore.

Clearly the index developed had to be one which could be produced and maintained for a reasonable expenditure in terms of time and money.

We divided our cost considerations into two parts: initial research and development costs, and recurring yearly costs. Examples of research and development costs are those associated with identification, definition, delimitation and validation of the primary data which ultimately enter into the final Cost of Education Index. On the other hand, recurring yearly costs are those associated with the number of school districts to be surveyed, the quantity and kinds of data to be collected, the processing of the

Nearly 1,200 school districts participated in building *School Management's* National Cost of Education Index. Each filled out a detailed five-page questionnaire which itemized expenditures for dozens of budget items for a two-year period (1959-60 and 1960-61).

The questionnaire itself was devised by Dr. Orlando F. Furno. Furno's early work at Columbia University, and particularly his involvement as a statistical research analyst in the Institute of Administrative Research, established his reputation as an educational research statistician. Dr. Furno, who served also with the U. S. Office of Education, is presently Director of Research for the Baltimore City Schools. It was at his suggestion, and with his guidance, that this project was developed.

The final total of school districts used in the carefully weighted sample was close to 1200. Each was selected because it represented, by virtue of geographical location, student population, and expenditures per pupil, a randomly selected unit of measurement.

In the first CEI reports (published in *School Management's* April, May, June, July and August, 1960, issues) the total sample used was 583. The size of the sample was increased to further assure the reliability of the statistics published.

The accumulated data was computed by *School Management's* research staff and placed on punched cards. This made it possible to analyze all the data by region, district size and expenditure level, as well as on a national basis.

data, and the analysis and promulgation of the results.

We had to consider, also, various sample designs. Different sample designs clearly result in varying costs. Methods are available, however, which distinguish efficient sample designs from less efficient ones. Sampling theory helped provide us with a powerful tool for evaluating the relative efficiency of various sample designs.

Relating this to our own situation, we were interested in securing information about a finite population (school districts whose total changes each year) from a part of it, called a sample. We wanted to describe characteristics of this population (called parameters) such as the mean, median, 75th percentile, 90th percentile, standard deviation, variance, etc. Certain precautions were taken to insure that the sample was a random one. We selected our school districts in such a way that each school district in the nation had an equal chance of being selected, and the drawings of the school districts in the sample were independent. In this survey as is the case in most, funds were limited. We had to select the most efficient sample design which would keep costs within budgeted funds.

### Form design

One factor affecting our costs dealt with the design of our questionnaire. Busy superintendents could not be expected to utilize their research and business staffs for months to complete a lengthy questionnaire. Recognizing this, we attempted to devise a short questionnaire. It was still five pages in length.

To minimize reporting errors, we designed our questionnaire in terms of the United States Office of Education's uniform accounting system. Even so, most school districts in the country have not put into use this particular standard receipt and expenditure account system. These school districts had to devote extra time to filling out the questionnaire.

For these reasons, only two to five cost data items for each major accounting division were requested. For example, instructional costs were broken down into classroom teachers' salaries, other instructional staff salaries, secretarial and clerical salaries, cost of instructional supplies, and other expenditures for instruction. Even if school districts had been able to—and were perfectly willing to—complete a lengthy school costs questionnaire, the costs for editing and processing such questionnaires would have been beyond our budgeted resources.

Several other obstacles in form design had to be overcome. Our questionnaire had to be designed both for electronic and hand processing systems. Numerous checks had to be incorporated into the questionnaire in order that its design would facilitate data recording, editing, data transfer, and data processing—all of which affect costs greatly.

### Sample design

Two sample design principles deal with the selection of elements (school districts in our case) and the number of elements (number of school districts). One of our objectives was to provide estimates of characteristics (instructional materials cost per pupil, average salaries

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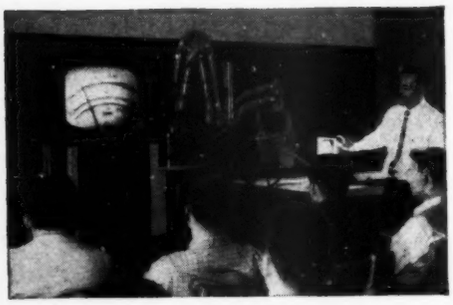

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of teachers, percentage of funds devoted to operation of school plant, etc.) of the universe of school districts (all districts in the country). Our basic problem was to design our sample in such a way that the errors in results from using a sample of school districts, rather than the universe of school districts, be held to a minimum.

Clearly, inaccurate estimates of true universe values may be due to nonsampling as well as to sampling errors. Nonsampling errors, such as poor form design, faulty definitions, inaccurate responses and nonrespondents, were discussed earlier. What interests us here is *sampling errors*. Factors which give rise to sampling errors are quantitative in nature. For example, we could have reduced our sampling errors considerably by increasing the size of our sample. But increasing the size of our sample would have increased our costs greatly.

### Sample size

Since sample size affects costs, we had to devise as efficient a survey design as was possible, consistent with available time and funds to do the study. One source of sampling error is directly related to universe variability. For example, other things being equal, the greater the standard deviation in our per pupil costs, the greater the sampling errors. To reduce the variability encountered in our sample, we divided our universe of school districts into sections called strata.

We stratified our universe of school districts into nine regions and seven size groups. This gave us 63 strata or cells, as we called them. Separate samples were taken from each cell, and the sample data were combined in such a manner as to yield suitable estimates for the whole universe of school districts.

Stratification has the effect of reducing the variability in pupil costs encountered, and thereby increases the effectiveness of a given sample size. However, we were still faced with the problem of how large a sample to select in terms of specific standards of precision. The following example should emphasize the critical role stratification and sample size have upon costs.

Let's consider at this moment the difference in cost which would result from differences in sample size,


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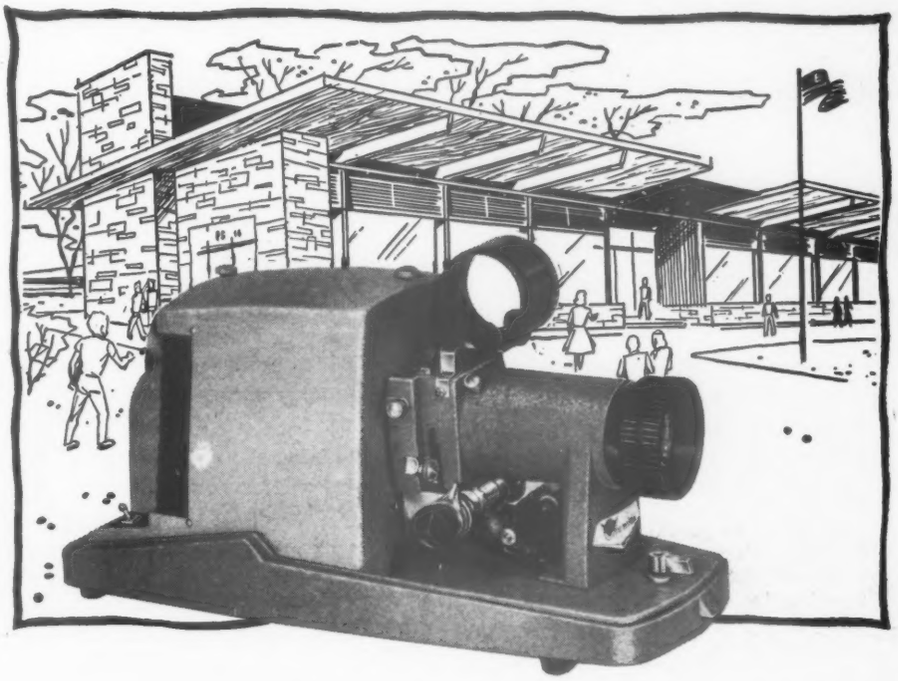

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| Mar. 25-28 | Philadelphia |

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to achieve results having a specified degree of precision.

Our cost equation may be expressed as

$$C = \$3.00n^{1.15}$$

*C* represents the total cost in conducting the Cost of Education Index study and *n*, the number of school districts in the sample. The number of school districts may be determined by the random sample formula

$$n = \frac{k^2 NV^2}{ND^2 + k^2V^2}$$

In this formula, the symbols may be defined as follows:

**n,** number of school districts in the sample

**N,** number of school districts in each stratified cell

**V,** coefficient of variation

**k,** known number or constant, independent of the sample and not subject to any sampling error. The value selected for *k* determines the probability that the sample result will have a relative error no greater than $\pm$ D.

**D,** relative difference between the estimated mean from the sample and the true mean.

Because per pupil costs were the statistics of primary importance to us, we utilized expenditure level (net current expenditures per expenditure pupil unit) as our single statistic for computing the size of the sample needed. Thus, some of the statistics of secondary importance were obtained with greater precision than specified, others with less.

We were now in a position to compute cost differences to conduct our Cost of Education Index survey arising out of sample size, when different precision requirements and probabilities were specified. Consider the two samples:

**Sample 1.**
*The sample mean shall differ from the true mean by $\pm$ $3 only once out of 100.*

**Sample 2.**
*The sample mean shall differ from the true mean by $\pm$ $5 only five times out of 100.*

From previous work, we had several good estimates of the standard deviation of expenditure level in

the school district universe, $\sigma x$, and the mean of expenditure level, $Mx = \frac{\Sigma x}{N}$, and used these parameters to calculate a coefficient of variation.

The number of school districts required to satisfy the degree of precision in Sample 1 was 2,917 districts and in Sample 2, 1,118. To conduct the survey according to the precision specifications in Sample 1 would have cost approximately $28,960 compared to $10,310 for sample 2 for sampling and computation alone. Thus, fulfilling the precision requirements of Sample 1 rather than Sample 2 would have required increasing expenditures by $18,650. Reductions in the magnitude of the sampling error means, and increases in the probability ratios, hardly appeared worth the increased costs.

### Objectivity criterion

We found problems due to our adherence to the objectivity criterion to be more serious in the realm of data gathering than data processing. We double checked our calculations for accuracy. However, data gathering and reporting involved the services of local school district personnel. We found on occasion, that the precise information requested was not given. Oftentimes this data was not readily available except through the laborious process of voucher examination. Thus, expenditures for the various items in the educational market basket were not reported to as high a degree of precision as we would have liked. To get precise reporting of the cost data would have sky-rocketed costs by millions of dollars.

### Simplicity criterion

We strove for simplicity in all the processes, operations and computations used in conducting our Cost of Education Index survey. We tried to simplify complex mathematical operations wherever possible. However, simplicity was not the governing criterion at the expense of accuracy or the other criteria. It was a goal to be desired, other factors being equal.

### Flexibility criterion

Adherence to the flexibility criterion raised a number of problems for us. We had to be sure that the Cost of Education Index would be constructed in such a way that regional, state, and local school district data could be substituted for national components. The result was a Cost of Education Index subject to all the different kinds of limitations always present in statistical calculations. For example, a National Cost of Education Index would be representative of all districts in the country, but not necessarily for all districts in a given state or any one particular district.

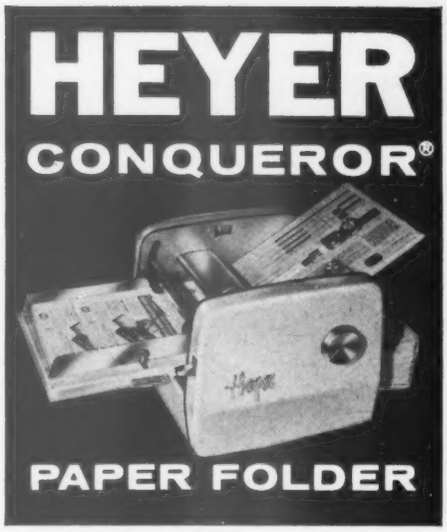
Consequently, the Index would not reflect the experience of a single school district as it shops around for educational bargains. Moreover, we realized that such an Index would not ordinarily be used to measure changes in total local school spending, but only to measure the effect of price changes to pay for the same educational market basket.

The problems we faced here arose out of the identification and ultimate inclusion of the components to be included in the educational market basket. Such problems are principally agreements in matters of opinion. There were no clear, hard, fast rules dictating what should or shouldn't go into the educational market basket.

### Standardization criterion

As everyone knows, the Consumer Price Index seeks to measure the price of a "market basket" of goods and services actually bought by urban wage earners. We wanted the Cost of Education Index to measure the cost of an "educational market basket" purchased by school boards. The Cost of Education Index was not designed to measure a level or standard of educational quality, no matter how desirable this might be. The foremost question we sought to answer was, "What is the cost of the educational market basket each year if the amount and quality of educational goods and services remain constant?"

We were not in a position to resolve all the problems centering around the maintenance of an educational market basket which would contain the same or relatively equivalent quality of goods and services. Time, money and staff in the amounts needed to do this were not available. We had to assume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**1961 CONVENTION**

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May 4-6

**Place**
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**Purpose:** *To enlist your advice and help on future editorial plans.*

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that the quality and quantity of educational goods and services for all school districts in the country did not change drastically over a period of one or two years.

### Self-generating effect

In the construction of a Cost of Education Index, one approach has been to discover items reflective of changing market conditions, but not subject to the decisions of educators or boards of education. The hope here is to eliminate the so-called "self-generating" effect in any Cost of Education Index. It may be likened to the "placebo" effect in medicine. This effect, if properly interpreted, would result in an upward bias in the Index.

Many attempts have been made to eliminate this upward bias, through the discovery of factors which are reflective of changing conditions in the educational market basket, but not subject to manipulation by educational authorities. The problems here center around the search for such causal factors. Present statistical methods to determine degrees of causality leave much to be desired. Moreover, factors reflective of changing conditions in the educational market are not periodically published and readily available.

### Problems of weighting

Customarily, index makers like to distinguish sharply between "simple" and "weighted" index numbers. We approached the problems of weighting by considering all index numbers to be weighted. This is true whether an index maker knows it or not. We preferred to ask the question: Is this scheme of weights good or bad? Thus, a number of interesting questions had to be solved: Should the weights be sums of money or physical quantities? Should the weights be fixed or changed from year to year?

Another weighting problem was due to the fact that a sample rather than a census of school districts was used. Most index numbers are made, however, from samples of data which logically fall within the field investigated. So this problem was not unique to SCHOOL MANAGEMENT's study. Sample distributions have always created weighting problems. But whether a sample or a census is used, cost components, whose distributions are characterized by a range and standard deviation of zero, result in more accurate relative weight assignments than those whose distributions have a wide range and large standard deviation.

There are no simple panaceas for resolving the complex problems met, and yet to be met, before a valid National Cost of Education Index is developed and maintained and finally achieves the respectability of, for example, the Consumer Price Index.

### Where do we go from here?

To achieve these goals, a National Cost of Education Index Advisory Committee should be formed. The members might be Presidential appointees. This advisory committee should be representative of all those organizations in the country genuinely concerned about the cost and quality of education in America. The formation of this committee is essential if the Cost of Education Index is to gain widespread acceptance.

Such a National Cost of Education Index Advisory Committee should set up general policies for the development and measurement of school cost units. These policies should aim at the creation of a favorable nation-wide climate for the results. Such a committee would engender, on the part of the users of the Index, confidence and respect for the validity of the school cost data developed for the Index.

We envision two additional committees operating under the direction of the National Cost of Education Index Advisory Committee. They would be: a small, technical committee composed of persons with special competencies and talents in statistics and index construction; and a curriculum advisory committee composed of persons with special talents in curriculum.

Admittedly, more often than not, great things fail to occur not because they cost money, but because no one happened to think of them. This is not true of a Cost of Education Index. As we pointed out earlier, its history goes back almost a century. What is needed now is *money*. The writer believes that this is clearly the responsibility of Congress in the years of our New Frontier. End

orange crate makeshift or gold-plated deluxe . . .

# What Should You Buy in a Filing Cabinet?

TIME was when you could define file quality quite clearly as Grades A, B, C, or D. But no longer do these designations mean much. Manufacturers now are producing models which cut across these former guide posts.

There are still legitimate "Grade A" files today, as there were in former years. But unqualified claims to this label by various manufacturers have in recent years tended to confuse the picture for the buyer.

Whatever the grade label, there have been many substantial improvements in all classes of files. More performance, more function have been built into economical versions of the so-called "Grade A" files to make them more practical for general office and classroom use.

And even in the "low-end" group of accepted commercial grade files are some features not too different from those of the high-priced makes. These files also have their place—but their place should be defined.

To intelligently approach the file market, a buyer must have clearly in mind the use for which the file is intended. Will a file drawer be opened on the average of once or twice a day, or 20 times a day? What about drawer loading and capacity? Are quietness and ease of operation important factors? The answers to these and other questions will define your specific requirements.

Accordingly, the informed buyer can buy for his specific needs. It is wasteful to spend extra dollars for a high-priced file where the need does not justify it, just as it is foolhardy to expect too much from a "cheap" unit. Filing requirements should be analyzed regularly, and standards changed as needed, to make sure that you are buying properly.

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The H-O-N Co., with its several series of HONOR and H-O-N Lines, can effectively fill the specifications for most of your filing needs. Nylon rollers are used throughout to assure the ultimate in quiet and easy drawer operation. Long, trouble-free life is guaranteed.

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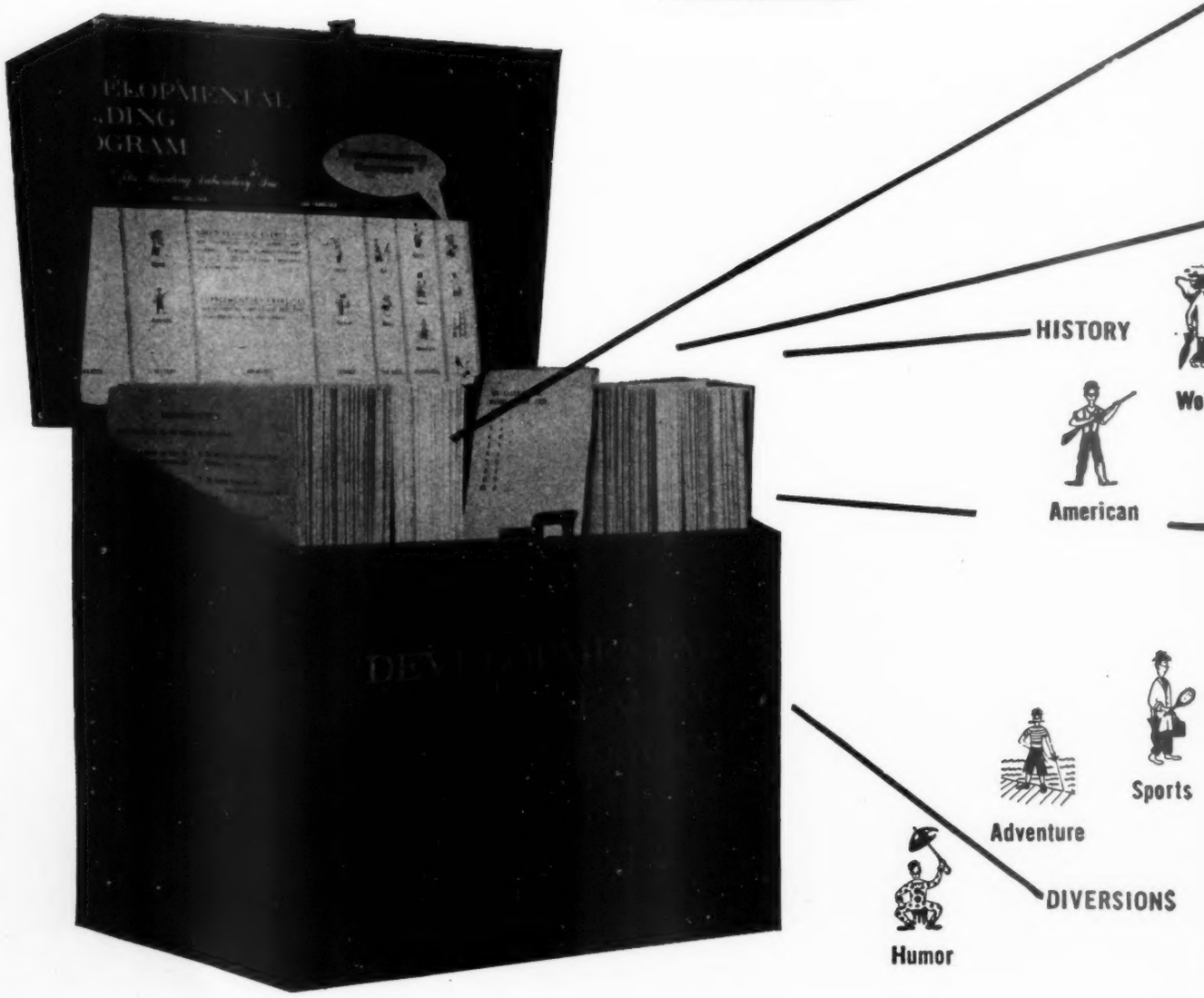

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➔ Incorporates in its basic design a recognition that no student reads on a given grade level in every subject . . . each subject-section contains text-oriented materials on grade levels six through twelve.

➔ Provides special exercises to develop high proficiency in direction following and visualization; inferential thinking; paragraph analysis; distinguishing fact from opinion and main idea from detail; the effective use of tables, charts, graphs; active vocabulary development.

While our program has been designed for and is in use in grades six through twelve, The Reading Laboratory urges its adoption, for all eighth and ninth grade students, especially those who are embarking upon a college preparatory course.

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# How to compare your district

**To get maximum value from comparison, you must know what to look for and how to analyze your figures. Here's a suggested method—plus some case histories of how other districts used last year's CEI.**

■ ■ ■ No yardstick has ever been developed to tell a school district how much it should spend to provide a "quality" educational program. In fact, no one can even define "quality education" in terms acceptable to everyone.

The best one can do is to compare his district's efforts to buy the dozens of different ingredients that go into his budget with the efforts of other districts with similar characteristics. For example, he can compare his overall, and specific, costs with districts of similar size. He can further narrow his comparison by comparing with districts of the same size in the same geographical region. In addition, if he chooses to, he can compare on the basis of size, geographical location, and expenditure level (cost per pupil). Finally, he can compare any one of dozens of specific expenditures, using all three of these factors.

To bring this into focus, let's examine a practical situation that might well arise in a typical suburban school district. Over a period of a few years there has been a noticeable increase in the turnover of the district's high school teaching staff. The board and the administration have been studying the problem by examining the obvious and usual causes such as housing, marriage, pregnancy, salary level, etc. They find they are competitive with other districts in their area so far as salary schedule is concerned. There appears to be no noticeable change in the "natural" or social causes that might be accelerating the turnover rate. So they look to some of the CEI figures to see if they can diagnose some hidden reason for their trouble.

First, they establish that they are paying a professional salary that is a little above "par" for their size and area. Next, they look at staffing adequacy—the number of pupils per classroom teacher. Here they find they're out of line—the "average" district of their size in their area has a ratio of 25 pupils per teacher. They are approaching 29. This is a significant factor—but it isn't enough to prove the case because they know that some of their immediate neighbors are actually exceeding this 29-1 ratio. Moreover, 29-1 isn't intolerable—it doesn't exceed what might be considered the "tolerance band." In fact, although it exceeds "average," some 40% of the schools of their size in their area, with their per pupil expenditure, have as high a ratio as 29-1.

So they look farther. They examine their expenditures for educational materials—books, maps, lab equipment, tape recorders, etc. Now they get a shock. They find they are in the lowest 10% here when all other things are equal! So their conjecture goes something like this: "Our relatively high salary schedule attracts good teachers. Our pupil-teacher ratio, while it isn't good, is not completely intolerable. But our teachers can't cope with the heavy load using inadequate facilities, old textbooks, and without important mechanical or electronic aids."

While this is, admittedly, a "pat" situation, it isn't improbable. The inter-relationship of these three factors—average professional salary, staffing adequacy, and educational materials expenditures—has a definite influence on attracting and holding good teachers. Moreover, research by such organizations as the Associated Public School Systems has established

# ct with your neighbors

a strong positive correlation between these three items and educational quality. Nor does the analysis of our school district have to stop here. Using the figures compiled in the CEI, the district can probe such factors as total administrative costs and clerical expenditures, maintenance, debt service, and capital outlay to further the measurement of its competitive position and to judge whether it is doing what it can to provide a quality education.

### What the CEI won't do

There is a very real danger, it should be pointed out, in expecting the CEI to help you establish a proper expenditure level for your district. It simply reports what others are doing financially, and it provides a yardstick by which you can measure whether or not you are keeping up with rising costs. It does not take into account what you should be doing to meet the challenge of modern educational needs and technology. Nor does it reflect, directly, how much your district should be doing in terms of its ability to pay.

### How to compare

Here are three case histories (drawn from dozens we have had called to our attention) of the methods used by other districts to bring comparative CEI figures before their taxpayers.

## How Englewood, Colorado, Explained Education Costs

Late in 1960, Assistant Superintendent Lewis Crum, of Englewood, Colo., prepared and published a 28-page report for his "stockholders." It was used in presenting facts to his school board and community in a public hearing on their budget. It was a simple, unpretentious typewritten publication duplicated on an office machine. He leaned heavily on copy drawn directly from the SCHOOL MANAGEMENT articles (SCHOOL MANAGEMENT will gladly permit any district to reprint CEI information on request).

Englewood's comparison covers every single item in the Cost of Education Index, first giving the national figure next to the district's own, then following with a series of simple charts for each of the major budget items. Here, for example, is a page from the Englewood report.

Finally, Dr. Crum produced a simple table of "Effective Buying Income" *(see box on page 162).*

Nowhere in the report does Englewood compare by district size. And nowhere does the report editorialize. The reader may draw his

How Well Are We Paying Our Instructional Staff?

| | Average | Quality Quarter | Top Tenth |
|---|---|---|---|
| National | $5,114 | $5,825 | $6,674 |
| Region | 5,288 | 5,700 | 6,099 |
| Englewood | 5,366 | | |
| | 5,659 * | * Proposed 1960-61 | |

own conclusions—a relatively easy process in light of the simplicity of presentation. To help his public come to valid conclusions, Dr. Crum adds one useful and fresh idea—a table showing the Consumer Price Index. He explains its use with this statement:

"There are four forces that have had their impact on educational costs:

"**1.** Increased enrollments.

"**2.** Increased cost of living.

"**3.** Increased standard of living.

"**4.** Betterment of the educational program.

"How much of each increase in educational costs has gone for each of the four factors? It is possible to determine our percentage of increased enrollment. It is possible to determine an estimate of increased cost of living by comparing to this chart. The remainder of the increase, *if any*, has gone to provide increased standard of living and/or betterment of the educational program."

EFFECTIVE BUYING INCOME

Comparison of Englewood, County and State Population and Effective Buying Income

| | COLORADO | ARAPAHOE | ENGLEWOOD |
|---|---|---|---|
| Population . . . . . | 1,720,800 | 106,100 | 35,700 |
| Per cent of United States | .9631 | .0594 | .02 |
| Households | 514,600 | 31,500 | 11,000 |
| Consumer Spending | 581,500 | 31,900 | 11,000 |
| **Effective Buying Income** | | | |
| Net Dollars. . . . . | 3,257,509,000 | 194,352,000 | 69,618,000 |
| Per Cent of United States | .9771 | .0583 | .0209 |
| Per Capita | 1,893 | 1,832 | 1,950 |
| Per Household | 6,330 | 6,170 | 6,329 |
| Cash Income per Household | 5,703 | 5,862 | 6,040 |
| **Per Cent of Income** | | | |
| 0 - 2,499 | 20.3 | 16.1 | 14.4 |
| 2,500 - 3,999 | 20.9 | 18.7 | 17.4 |
| 4,000 - 6,999 | 35.9 | 40.6 | 42.1 |
| 7,000 - 9,999 | 12.8 | 14.6 | 15.0 |
| 10,000 and over | 11.0 | 10.5 | 11.1 |

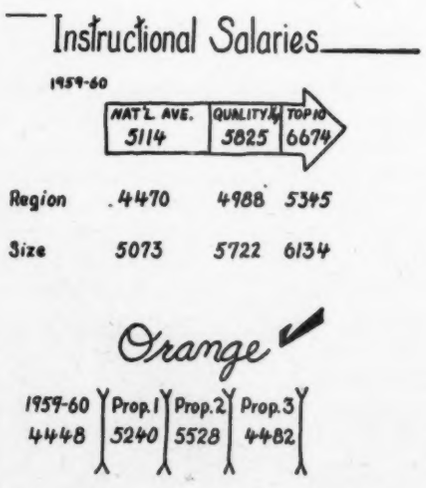
Source: Survey of Buying Power, Sales Management, July 10, 1960

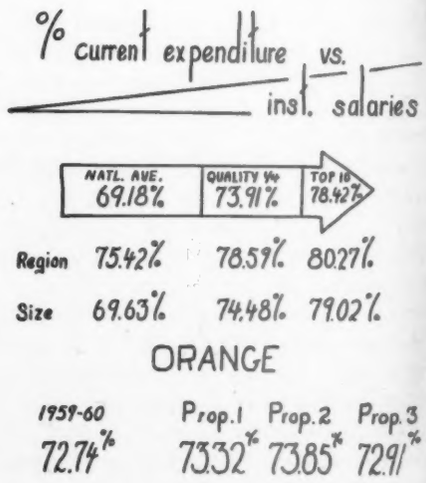
# How Orange, Texas, Explained Educational Costs

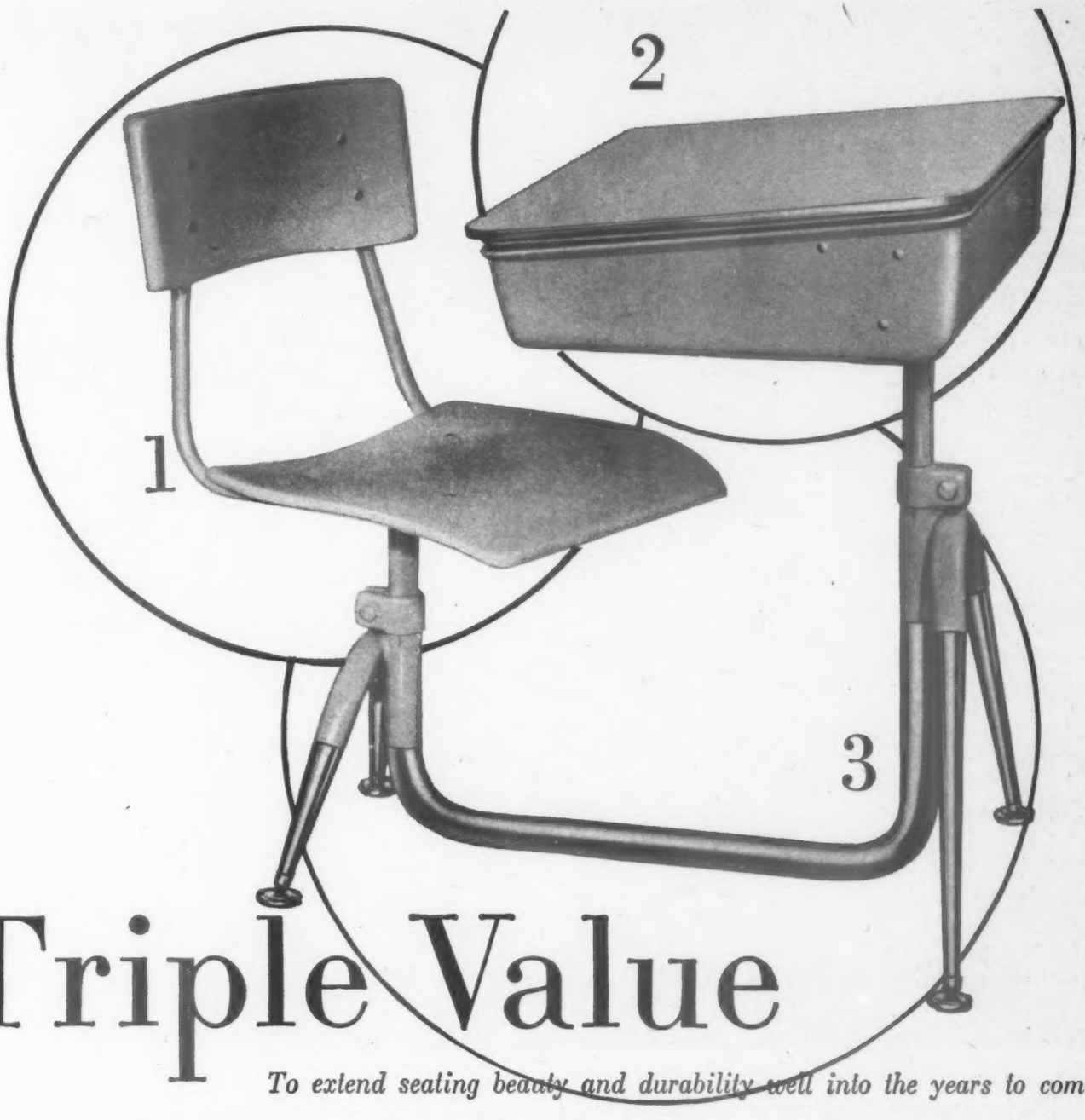
■ The Cost of Education Index was used by Superintendent M. L. Brockett, in Orange, Tex., to bring into focus an immediate and critical problem: teachers' salaries. Says Brockett: "The Orange Independent School District assesses real and personal property at 100% of market value. The 1959-60 budget required an increase in the tax rate of 10 cents from 72 cents per $100 valuation to 82 cents per $100.

"It became obvious that the 1960-61 budget would require an additional tax increase if the instructional program of the district was to be maintained at its existing level of support. It was likewise obvious that a much needed salary increase for instructional personnel

*continued on page 166*



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**1** **Seats and Backs** in coral or turquoise Arlex plastic, the wear-resistant miracle material that gives cushion comfort and the strength of steel. Supplied also in maple veneered hardwood plywood.

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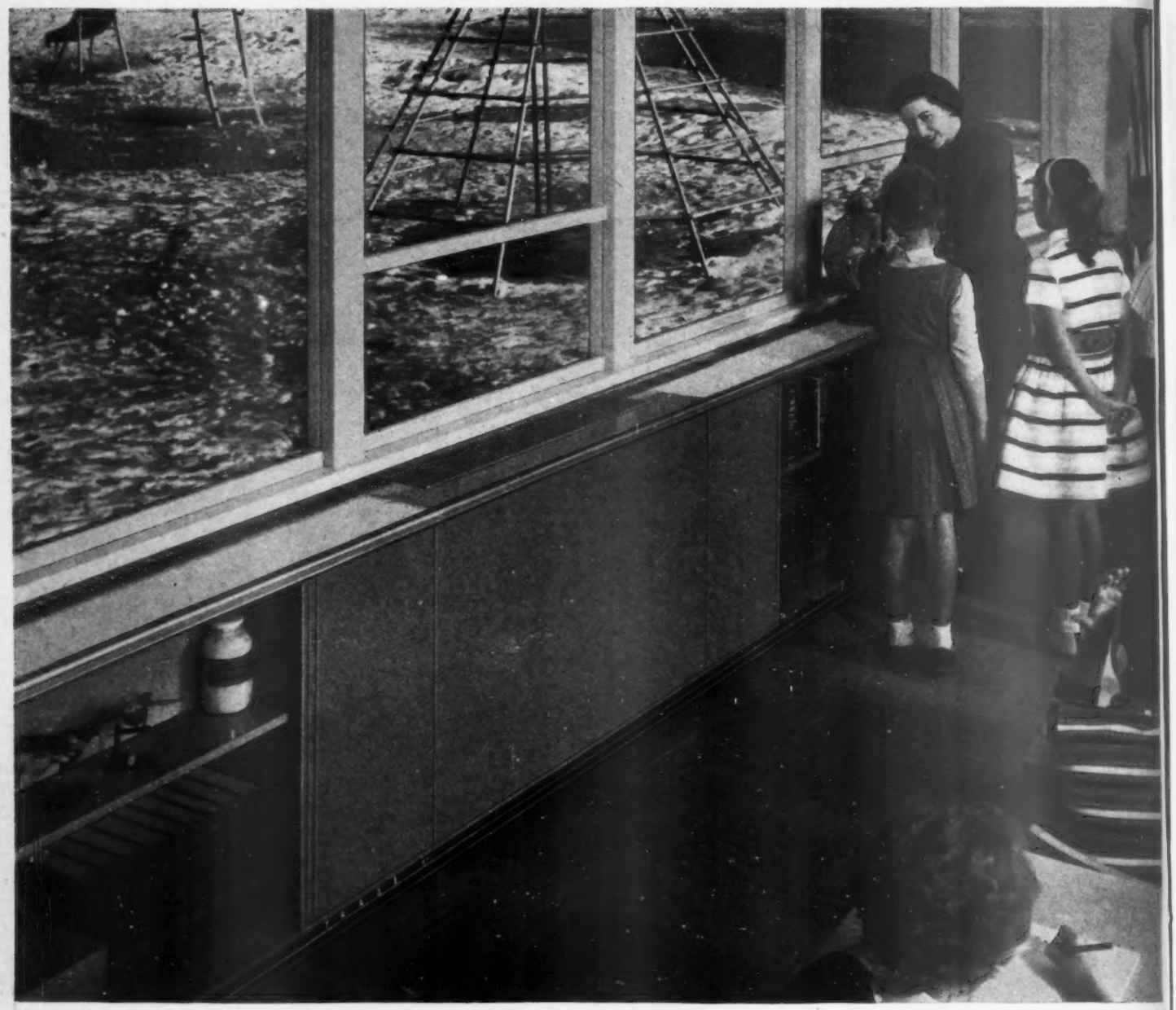

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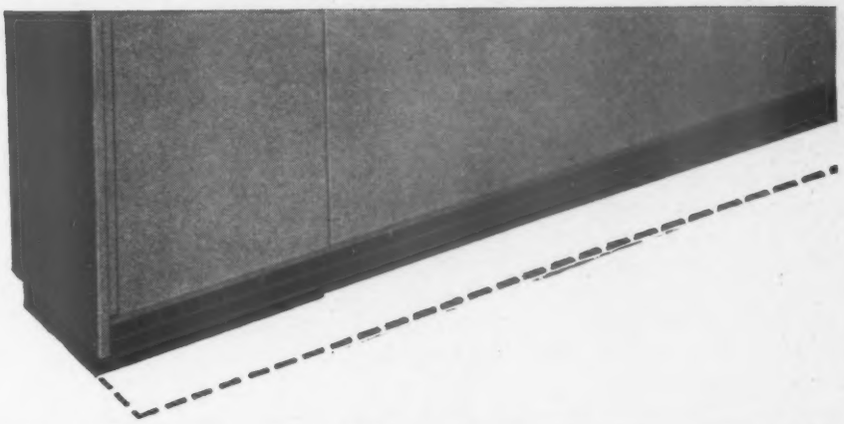
NOW there's a TRANE Unit Ventilator to meet the requirements of any school, in any climate. New, more compact units are available with complete, year-around air conditioning—in addition to heating-ventilating. Air conditioning may be included when the system is installed—or added later easily, economically without classroom alterations.

These new TRANE units provide extra classroom space. Their trim, modern lines complement modern school design. And optional shelving provides convenient storage space for books and teaching aids.

*How important is complete air conditioning* to the modern school? More and more school planning is taking air conditioning into consideration. It offers the opportunity to utilize school facilities during warm summer months. And it can extend school use to civic and municipal purposes. Now TRANE—the people

**Provides more usable classroom space!** The new TRANE Unit Ventilator is 21% thinner than other makes of heating units . . . 29% thinner than other makes of heating-air conditioning units. (Other units are as much as 16⅝" deep.) You can save as much as 14 sq. ft. of space in every classroom!



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- **Modern appearance**—Trim, more compact units designed and styled with modern school decor in mind. Components blended together by matching trim to form a single, continuous unit. Attractive shelving and cabinet space. *All* types—hot water, steam, electric and air conditioning—in same space-saving cabinet design.
- **Continuous, room-wide ventilation**—Only the TRANE *Kinetic Barrier* system provides continuous powered ventilation and heating or cooling from room-wide outlets. Eliminates window downdrafts, sleepy corners.
- **Sturdy construction**—Rugged casing takes hard knocks of classroom use. Dampers, fans, coils designed for long, trouble-free service. Unit, shelving and extensions are of heavy gauge steel.
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***...and TRANE provides a single source for every school heating, ventilating, air conditioning need!***

**In gymnasium and locker rooms,** TRANE Torrivents heat and ventilate, blend in outside air in any desired proportion, gently warm the atmosphere. 1250 to 33,000 cfm.

**In hallways and corridors,** TRANE Wall-Line and Wall-Fin Convectors provide economical heating for long wall and window runs. Capacities for any size or type of installation.

**In entryways,** TRANE Force-Flo Heaters greet pupils with warm welcome . . . blanket doors with a wall of tempered heat that blocks cold air, stops drafts.

# Unit Ventilators now air conditioning!

who have air conditioned *everything* from skyscrapers to jet planes to subway trains—offers air conditioning equipment designed especially for the modern school.

When you plan to build or remodel your school, turn to TRANE for the latest, most modern Unit Ventilator system. You'll save space, cut installation and operating costs—while providing ideal comfort conditions, all day long. Have your architect, consulting engineer or contractor contact your nearby TRANE Sales Office; or write to TRANE, at La Crosse, Wisconsin.

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was impossible without a large increase in the local tax rate, unless the state taxing authority increased its support.

"In view of these facts, three budget propositions were prepared for study by board members. A justification was made for each of the three propositions. Through the use of the Cost of Education Index survey information, an opportunity was provided to compare the expenditures for schools in the local district with other districts of our size in the area and throughout the nation.

"The conversion of our tables to color slides (*see illustrations*) for use with an overhead projector made it possible to present the information to faculty members (250), to PTA groups and service clubs. It also provided an effective method to study our district's position with the members of the board of school trustees.

"A part of the information will be used in our bond issue campaign during the early part of 1961. Separate slides were made for each of the budget categories. We found that a summary of expenditures was valuable, so this table was also placed on a slide for use with an overhead projector. This enables us to point out with a grease pencil the relative expenditure position of our district in comparison with the national and area averages."

# How Marple-Newtown, Pennsylvania Explained Educational Costs

■ The problem of the Marple-Newtown, Pa., Joint Schools was (and is) one of housing pupils. As far back as 1952, the district retained educational consultants, Engelhardt, Engelhardt and Leggett, to survey its needs. Again, in 1960, it called on the firm to reproject its needs and relate them to the district's overall educational costs.

In October, 1960, the consultants submitted their report. Here is the concluding section of that study which demonstrates another approach to the use of CEI figures:

"In a school district of a growing suburban community, the relationship of the costs of the housing program to the costs of the educational program are of great concern. A number of factors make this so.

"One is that the property tax base of a typical suburban community is often largely composed of the homes that provide the children, supplemented by commercial valuation that arises as service areas to homes. The percentage of the total assessed valuation that is derived from industrial property is very low. With an increasing yield of children per house and little valuation that can produce real revenue outside of commercial property, Marple-Newtown is in a typical suburban situation. The major burden of school costs rests on individual home owners.

"Second, in a rapidly growing suburban area there is necessarily an urgent and heavy demand for school housing that places a disproportionate load of capital expenditure upon a district at one time. When a suburban area is faced with such demands for new construction, and has a limited tax base, the burden upon the individual home owner is disproportionately high.

"In reviewing the situation, use was made of the Cost of Education Index published by SCHOOL MANAGEMENT magazine. . . .

"A comparison is shown in the following table of the percentage of the 1960-61 budget of the Marple-Newtown Joint School District distributed by budget categories as compared with the SCHOOL MANAGEMENT Cost of Education Index as reported for 1959-1960."

The comparison of Marple-Newtown percentage of expenditures by various budget categories reveals no very significant variations from general national practice.

**"Expenditures per pupil.** A basic statistic in educational finance is expenditure per pupil. In order to arrive at uniform reporting of this data, a number of weighted pupils (expenditure pupil units) is used to indicate

*continued on page 170*

**BUDGET CATEGORIES—1960-61 BUDGET**
***Marple-Newtown Joint School District***
**As Compared with Cost of Education Index**

| Budget Categories | Percent of Total Current Expenditures | |
|---|---|---|
| | Marple-Newtown 1960-61 | Cost of Education Index 1959-1960 |
| Administration | 6.1 | 4.0 |
| Instructional Costs | 71.5 | 72.7 |
| Attendance Services | .2 | .1 |
| Health Services | 1.3 | .6 |
| Plant Operation | 10.8 | 9.5 |
| Maintenance Costs | 1.3 | 3.5 |
| Fixed Charges | 5.6 | 3.2 |
| Other Services | .1 | 2.2 |
| Transportation | 3.1 | 4.2 |
| Total | 100.% | 100.% |

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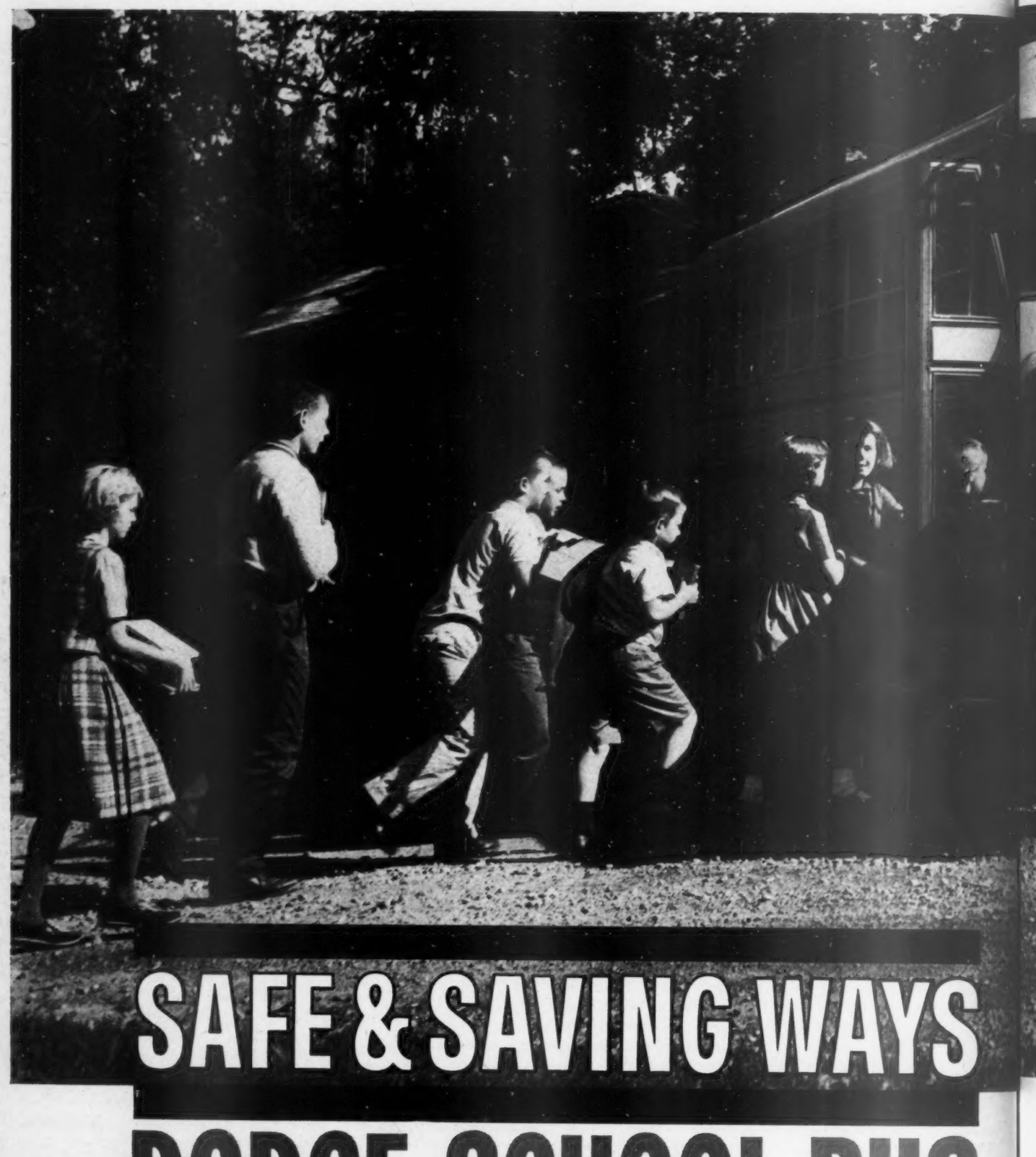

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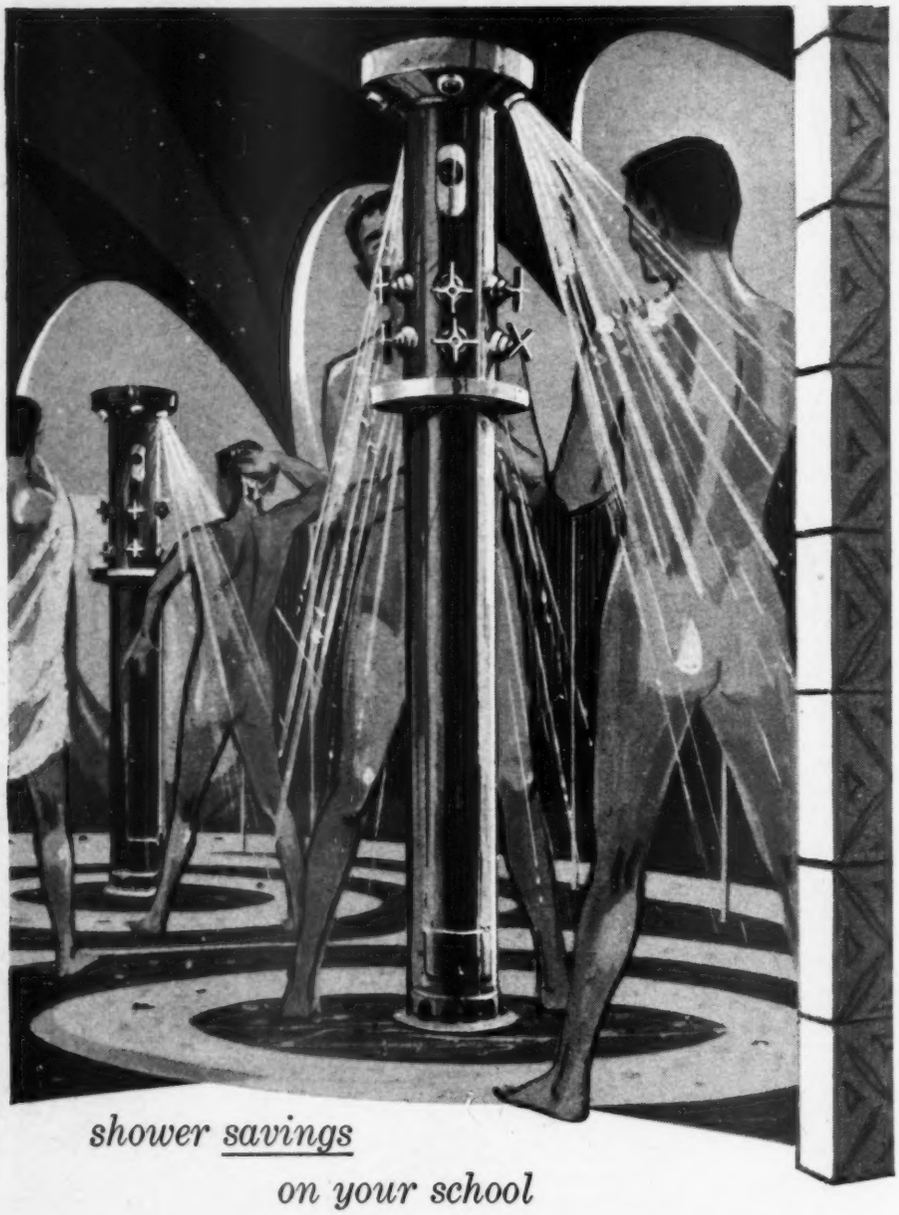

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numbers of students. Total current expenditures less transportation, capital outlay and rentals, and summer recreation programs is also used.

"The expenditure per pupil is the result of dividing the total current expenditure ($1,980,563) by the number of weighted pupils (5,961). The result is an expenditure of $332.25 per pupil in total current costs.

"The average cost per pupil in the nation in the 1959-60 school year was $292. In the New York-New Jersey-Pennsylvania area, the average cost was $376. The Marple-Newtown School District was spending less per pupil than 50% of the school districts in its region. Twenty-five percent of the school districts in the same region were sepnding more than $463 per pupil. In view of the location of the school district in the Philadelphia metropoltian area, the figure of $463 per pupil is probably the one to use for purposes of comparison.

"Further amplification of the reason for the considerable difference in expenditure per pupil follows, in an analysis of pupils per teacher and pupils per administrator.

**"Pupil-teacher ratio.** This area analyzes the number of members of the instructional staff per 1,000 students (weighted pupil units). Analysis of the budget, the 1959-60 teacher assignments, and the like suggests that the school system had 227 instructional positions including principals, department heads, teachers, librarians and the like. When this figure is divided by the number of weighted pupils (5,961) the result is 38.1 teachers per 1,000 weighted pupils. This is well below the national average of 43.86 instructors per 1,000 students and below the average for the New York-New Jersey-Pennsylvania region which is 45.28 instructors per 1,000 students. In the same region, 25% of the school systems employ staff at the rate of 50.88, or better, instructors per 1,000 students.

**"Pupil-administrator ratio.** Similarly, the ratio between the number of weighted pupils and the number of administrators was reviewed. The 1960-61 budget showed a total of six central administrators including a superintendent, two administrative

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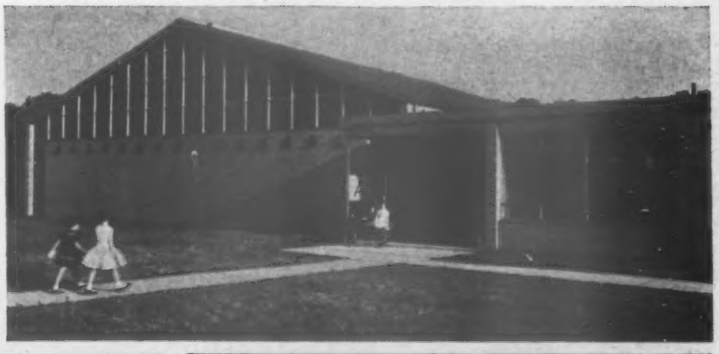

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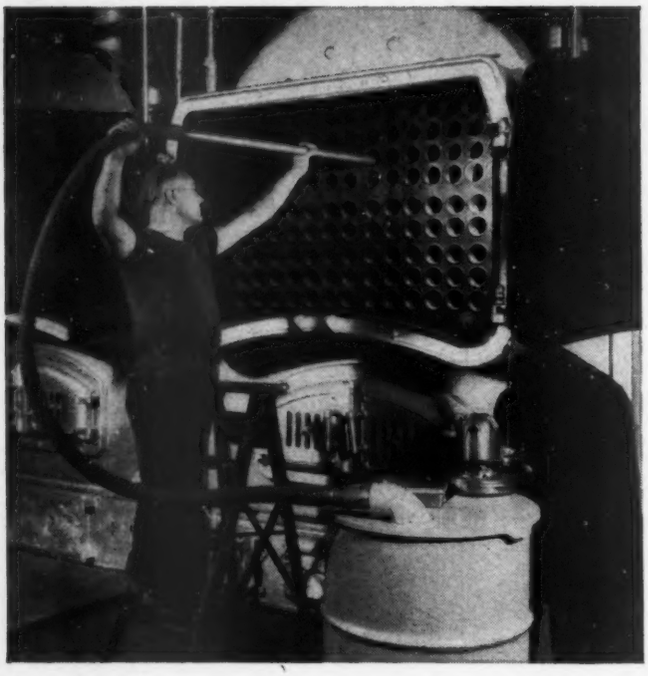

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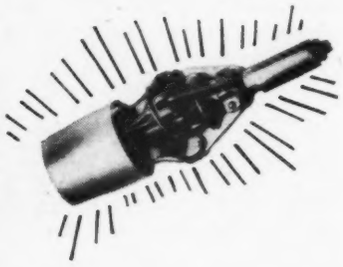

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assistants, a secretary of the board, an assistant secretary and a position of business manager. The six positions, when divided by the numbers of weighted pupils, is equivalent to 1.005 administrators per 1,000 pupils. This is greater than the national average of .78 administrators per 1,000 pupils but less than the regional average of 1.26. Twenty-five percent of the districts in the region, however, have 2.21 or more administrators per 1,000 students and, again, this is a more significant figure to use for comparison with this school district.

**"Relationship between expenditures for housing and current expenditures.** With expenditures for 1960-61 budgeted in Marple-Newtown Joint Schools for capital outlay, debt service and rentals at $815,066—and current expenditures exclusive of capital outlay, debt service, rentals, transportation and summer recreation programs budgeted at $1,980,563—capital expenditures are 41% above net current expense.

"This figure is markedly higher than the national and the regional average of 15%. Only 10% of the school districts in the nation are spending 33% or more above the current expenditures for housing. The expenditure per weighted pupil of $136.73 for housing in the 1960-61 budget is more than double the regional average of $61 per pupil. Only 10% of the schools in the region exceed $107 per pupil in expenditures for debt service and capital outlay which indicates that this district is well above the norm.

**"Summary of financial implications of providing housing for students.** This financial data, taken in conjunction with observations on class size, capacity and other factors, indicates that the school building situation has worked adversely upon the educational program. This has been the result of the nature of the community, its rapid growth and its increase in number of pupils per dwelling unit. The evidence suggests that the school system has been handicapped by heavy expenditures for new schools and that, as a result, the pupil-teacher ratio is unfavorable, the cost per pupil for current expenses forced to remain at a low figure, and the administrative organization relatively understaffed." **End**

*Report to Educators from Joanna Western*

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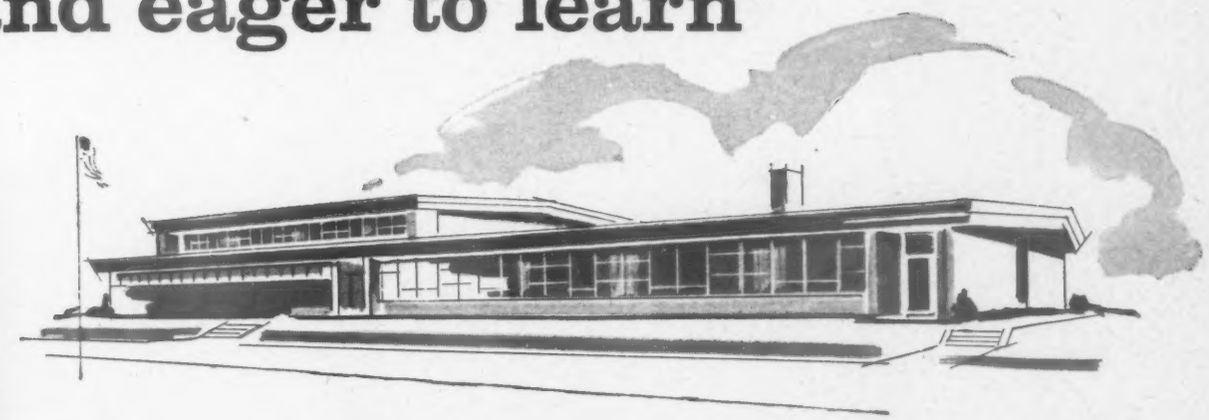
Superintendent of Schools C. H. Pygman, in one of the classrooms in Jane Addams Elementary School. A Honeywell on-the-wall thermostat helps students get more out of classwork.

# on the wall, our and eager to learn"



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## How to use the Cost of Education Index

*continued from page 85*

### WHAT SHOULD WE INCLUDE UNDER OPERATION OF PLANT?

Plant operation should be distinguished, for purposes of this study, from maintenance. Operation involves the heating of the schools, the cost of utilities, and other similar activities designed to keep the physical plant open, available and ready for use.

### WHAT SHOULD WE INCLUDE UNDER MAINTENANCE OF PLANT?

Maintenance includes those activities that are concerned with keeping the grounds, buildings and equipment as close as possible to their original condition. Painters, plumbers, electricians and other types of repairmen would come under this category.

### WHAT SHOULD WE INCLUDE UNDER FIXED CHARGES?

Fixed charges include expenditures of a generally recurrent nature which cannot be easily allocated under any other category. Insurance costs, rental of land and buildings, and interest on *current* loans are items included in this category. State, county or local retirement funds, Social Security and pension payments made by the district, are also included. Deductions from salaries are not.

### WHAT SHOULD WE INCLUDE UNDER FOOD SERVICES?

Under food services, only a district's out-of-pocket expenditures are included. All other expenditures—those covered by subsidies or meal payments—should not be included.

### WHAT SHOULD WE INCLUDE UNDER STUDENT BODY ACTIVITIES?

Again, these are the district's out-of-pocket expenditures. Costs covered by game receipts, sale of yearbooks or newspapers, revenue from dances and dramatics, or by student dues, should be included.

*PLEASE TURN PAGE*

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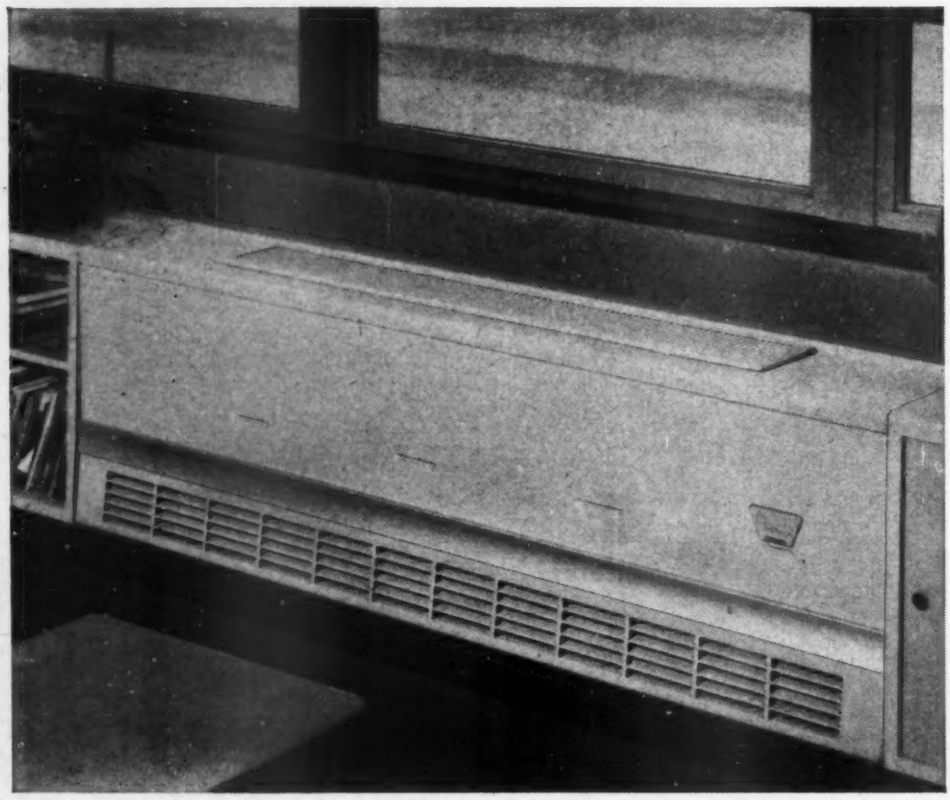

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## WHAT SHOULD WE INCLUDE UNDER TRANSPORTATION SERVICES?

Costs for conveying students between home and school, and to and from school activities, are included in this category. Expenditures for salaries of drivers and supervisors, contracted services, replacement of vehicles, transportation insurance, gasoline, tires, oil, rent, repairs, etc., should be in this category, too. Include under transportation salaries, only money paid directly to transportation workers. If your district *contracts* for bus service, do not include under salaries the amount the contracting company pays for this item.

## WHAT SHOULD WE INCLUDE UNDER CAPITAL OUTLAY?

Capital outlay includes current expenditures made for land site, improvement of grounds, architect's and engineer's fees, alteration of buildings, furniture and other equipment, but not the cost of replacing wornout items. Current capital outlay does not include payments from bond monies and bond anticipation notes.

## WHAT SHOULD WE INCLUDE UNDER DEBT SERVICE?

Debt service payments include the amount expended by the school district for payment of interest charges and reduction of principal on outstanding indebtedness other than for current loans. ("Current Loans" is money that is borrowed and paid back during the same fiscal year. Such expenditures should be listed under fixed charges.) *Include in debt service payments only the amount being paid out this year, not the district's total indebtedness.* If your district's indebtedness is $500,000 and you are reducing this amount by paying $40,000 during the year, $40,000 is the amount that is spent this year.

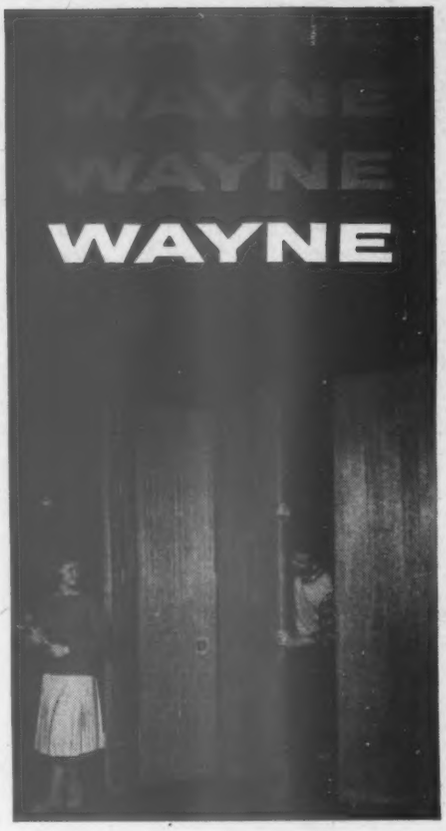
## Questions and Answers

Presented in the following columns are answers to some of the questions about the Cost of Education Index that the editors have encountered most frequently. If you have other questions you would like answered, please send them to Cost of Education Index, c/o SCHOOL MANAGEMENT, 22 W. Putnam Ave., Greenwich, Conn. We will answer them as promptly as possible.

**Question:** *How accurate are your statistics?*

**Answer:** The CEI survey is designed to result in a set of cost figures which should not differ from the true cost figures by more than 1.65%, with a probability ratio that the cost figures so obtained should lie within this range of the true cost figures 95 out of 100 times.

For example, the CEI cost figure for expenditure level (Median net current expenditures per expenditure pupil unit) is $303. This figure is obtained from a sample of school districts and not from using all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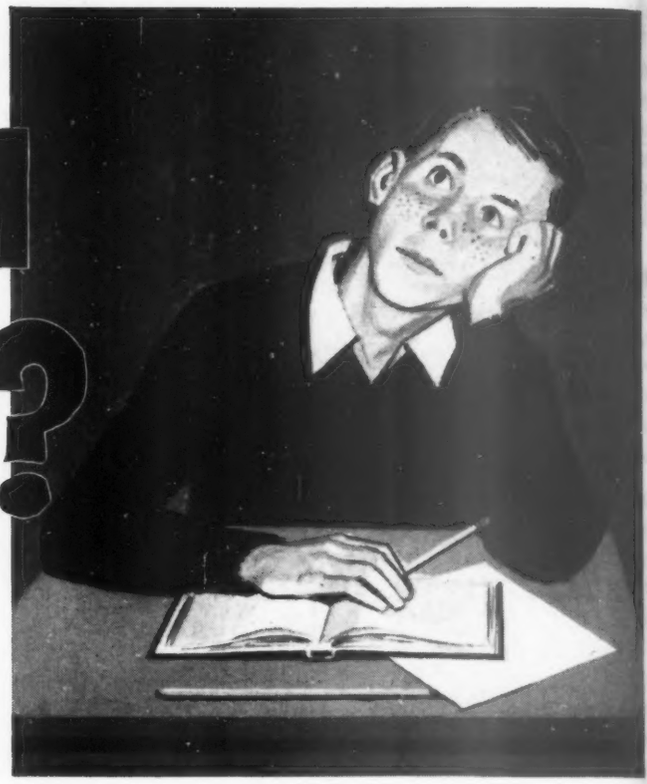
# PROBLEM STUDENT?



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school districts in the country. Therefore, the CEI sample is so designed that we can reasonably expect 95 out of 100 times that the true expenditure level figure should be within $5 of the $303 expenditure level figure obtained from our sample.

**Question:** *Our state reports require us to include health, transportation, and fixed charges all together as "auxiliary services." It would help us if you did, too. Why do you use the category breakdowns you do?*

**Answer:** The breakdowns used in this report are those recommended by the U.S. Office of Education and therefore are the ones used most widely by school districts in the United States. One of the problems involved in compiling statistical information concerning the nation's public schools, is the lack of uniformity in the way in which the individual states and districts keep this information. It is one of the goals of the Cost of Education Index to stimulate an interest in a single, all-inclusive accounting system that would make accounting practices in all states completely comparable.

Because expenditures for health, transportation and fixed charges are of an entirely different nature, they would not follow the same cost increase or decrease patterns. An Index to cover these three items buried under "auxiliary services" would not be a very accurate one.

**Question:** *We make use of a number of substitute teachers. Should we include their salaries under "salaries of classroom teachers?"*

**Answer:** If the substitute teacher is a person who merely replaces a member of the regular faculty who was ill or out for any other reason, the substitute's salary should not be included under "salaries of classroom teachers." Nor should the substitute be listed under classroom teacher personnel. This is true even if the substitute taught every day of the school year. In this case, salaries for substitutes should be listed under "other expenditures for instruction."

However, if what is meant by a substitute teacher is a teacher who has a class of her own (not replacing temporarily a teacher who was not able to teach for that day or period of days), then her salary should be included under "classroom teachers' salaries" and she should be reported under number of classroom teachers.

**Question:** *We use a number of part-time workers. How should we include them in computing our salary figures?*

**Answer:** All part-time persons who are regular members of the school staff must be included in this survey. Estimates should be made of the percentage of a full day they work, and this portion of a person should be listed under personnel. For example, a nurse who works one day per week would be two-tenths (.2) of a person. A custodian who works four hours each afternoon would be one-half (.5) of a person. A secretary who works four mornings a week would be four-tenths (.4) of a person. A bus driver who works an hour each morning and an hour each afternoon would ordinarily be a quarter (.25) of a person, assuming that eight hours is considered a normal workday in your area.

**Question:** *In two of our schools, our principals also teach. Should we include them as principals or teachers?*

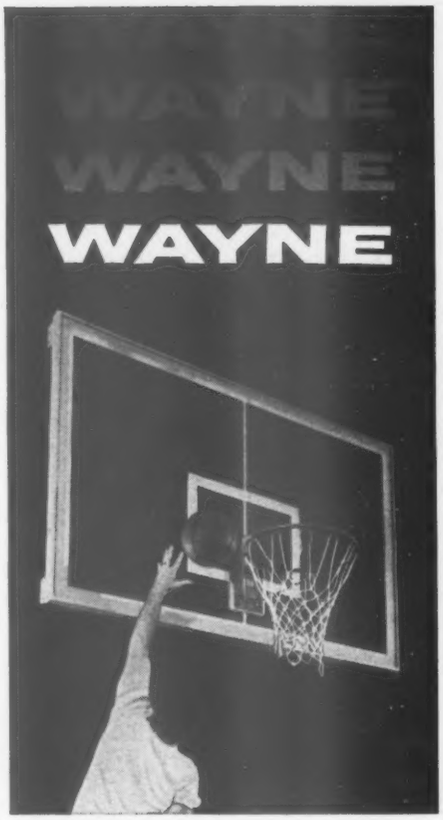
**Answer:** Both. Their salaries and their time should be pro-rated. If your teachers normally teach five classes a day, and the principals teach two, two-fifths of their time and their salary would be listed under classroom teachers while the rest of their time and salaries would be listed under "other instructional personnel."

**Question:** *We have a part-time nurse who also teaches. Should we include her under instructional services or health services?*

**Answer:** Both. Her time should be pro-rated as to how much she spends on each part of her job. Then her salary should be assigned in the same proportion to each category.

**Question:** *We have no superintendent in this district. Should we include our building principal under administration?*

**Answer:** Not unless he is performing the functions of a superintendent. If he is working strictly as a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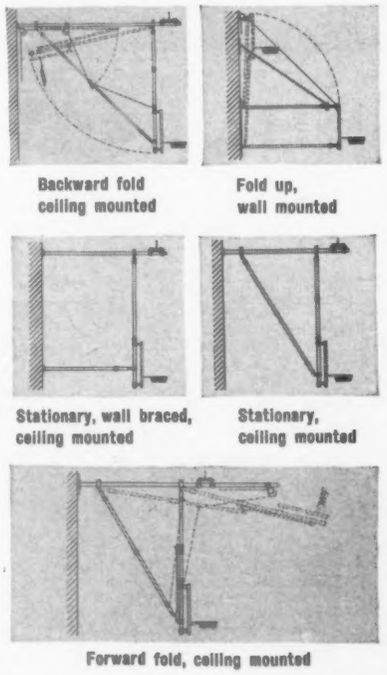
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building principal, he should be included under the instruction category only. If he splits his time, it must be pro-rated between administration and instruction.

**Question:** *Why didn't you ask for number of food service workers?*

**Answer:** In general, these people are are not paid out of school district funds. Their salaries are paid from receipts from students, teachers and government subsidies.

**Question:** *Our administrative salaries appear quite low but actually we pay our superintendent very well. This is because you have lumped all professionals under administration together. Our superintendent has a number of young assistants who are at the bottom of the pay scale. Why don't you separate the salaries for superintendents from those of other professionals?*

**Answer:** In planning this study, we were aware that many important questions were going unasked and therefore unanswered. We could, and wanted to, ask thousands of other questions. But this would have made a questionnaire hundreds of pages long. We doubted that many busy superintendents would have utilized their busy staffs to complete our survey. The extra cost to process this additional data would have been prohibitive. A good source for the particular information you want is the National Education Association which annually publishes superintendents' salaries by district.

**Question:** *Why isn't transportation part of Net Current Expenditures?*

**Answer:** Net Current Expenditures are those costs which directly affect the quality of education children receive. Transportation costs are expenditures made to get children to school, not to educate them. In some districts, transportation costs actually are so burdensome that funds are drained from the current educational program.

**Question:** *Our district had a cash balance of $250,000 with which to start this year. Should we include this under local income or income from other sources?*

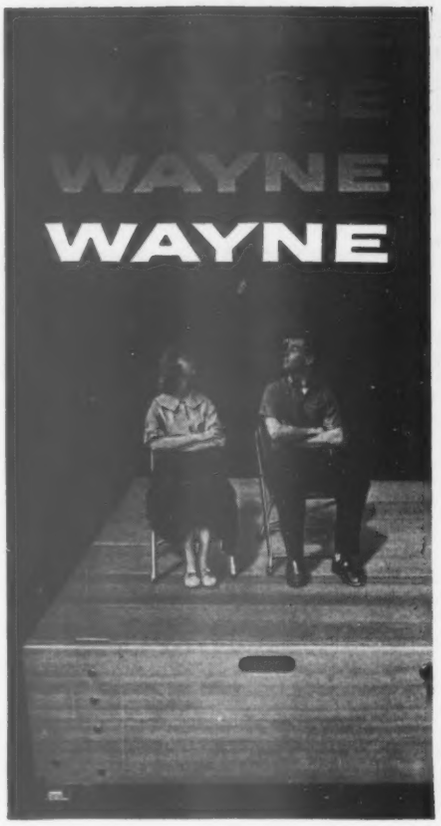
**Answer:** Neither. The cash balance was income reported in some previous year or years. Income for the current school year should include only the amount of money being raised specifically for the current year. This will mean, in many cases, that the budget appears to be unbalanced—you are spending more than you are taking in. This might be true for a given year. But an examination of previous years will show times when the district received more money than it expended.

**Question:** *Our salary schedule at each step and level is several hundred dollars below those of other districts in our area. Yet our per pupil cost for instruction is much higher than any of these other districts. Will the CEI help us to explain "why" to our school board, and make the community recognize the need for a better salary schedule?*

**Answer:** Yes. The CEI will help you pinpoint which expenditure category is causing your high per pupil cost for instruction. For example, it might be in classroom teachers. CEI salary data would indicate whether or not your average teacher's salary is out of line in terms of your overall per pupil costs for education. Even though your salary schedule is lower than those around you, your district may have an unduly large number of older teachers at the top of your salary schedule. A distribution of classroom teachers' salaries will quickly indicate if this is so. Thus your average classroom teacher's salary would probably show up either as high or higher than the districts around yours. Further analysis might indicate that in the past, your district had a salary schedule competitive with those around you. Young competent teachers were hired then. They remained with your system over these years. Yet little by little your district's salary schedule fell behind those of your neighbors. Your staff became unbalanced age-wise; the older teachers remained (they were too high on the salary schedule to leave) but the young, competent ones stayed a couple of years to get teaching experience, and then most left for higher pay in other districts.

Or, perhaps your district has a better pupil-teacher rating resulting in higher *total* expenditures for salaries, despite a poor schedule.

Other possible factors might include a greater number of principals, supervisors and librarians, or high costs for teaching materials. **End**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## Yours for the asking

*continued from page 28*

Co. A variety of types are included, covering those designed for safety, drainage, shock absorption, and traffic direction. Specifications of matting and custom-built mats are also described.

*For a free copy of this catalog, circle number 894 on the Reader Service Card.*

**Binding machines.** An illustrated booklet published by the General Binding Corp. explains how machines can streamline the handling of paper in your office. The plastic-bound guide covers every operation in which paper is used, including typewritten materials, reports, technical data, manuals, catalogs and general presentations.

*For a free copy of this booklet, circle number 824 on the Reader Service Card.*

**Thermo-hydro lab equipment.** An illustrated brochure, published by the Will Corp., lists a variety of ovens, humidity chambers and water baths for science laboratory use. One featured oven has a heating system which eliminates temperature "overshoot" by gradually reducing heater input as the preselected temperature is approached. Water baths listed include the electromagnetic agitation principle.

*For a free copy of this brochure, circle number 843 on the Reader Service Card.*

**How to make transparencies.** A catalog of slide-making materials published by Projection Optics Co. lists uses, prices and general information on material needed to make transparencies for overhead projection. Specifications for two overhead projectors are also given.

*For a free copy of this catalog, circle number 832 on the Reader Service Card.*

**Curtain walls and windows.** Recommended design procedures, and full descriptions of curtain walls and windows, are featured in the Geyser Co.'s 1961 catalog. The "Geyser grid system" of fenestration is explained, and the catalog includes numerous sketches of typical installations.

*For a free copy of this catalog, circle number 822 on the Reader Service Card.*

*News from the business firms serving your schools*

### Copy machine saves chemicals

A photocopy machine manufactured by the Photorapid Corp. incorporates a chemical conservation feature which is said to triple the life of the fluid. A cartridge is used to "load" chemicals into the machine like a gun, and they are not exposed to air except when actually in use.

Since the chemicals are sealed, the machine is portable.

*For more information, circle number 865 on the Reader Service Card.*

■ ■ ■

### Compact typewriter for class

Smith-Corona has introduced a compact electric typewriter, approximately one-half the weight and bulk of a deluxe electric, suitable for use in classrooms. The compact is being offered at reduced prices to schools.

It features a simplified electric carriage return, a concave keyboard on

which the frequently used controls are adjacent to the typing keys, and modernistic styling.

*For more information, circle number 856 on the Reader Service Card.*

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### TV-microscope system

A closed-circuit television package, which includes a TV camera mounted on a microscope, enables students to observe enlarged images of conventional microscope slides.

The entire system, manufactured by DuMont, includes a self-contained closed-circuit camera and coaxial cable, tripod, 17-inch monitor, and tele-

vision microscope with TV mount adapter, trinocular head, light source and four objectives. The unit plugs into a conventional 115-volt electric outlet.

*For more information, circle number 870 on the Reader Service Card.*

■ ■ ■

### Interval timer

An interval timer which can be flush or surface mounted on walls has the usual hour and minute indicators plus second markers, and can be set from a zero point like a stop watch. Cincinnati Time Recorder Co. is the manufacturer.

The timer can be reset for clocking the next operation or restarted to continue timing the original activity if there is an interruption.

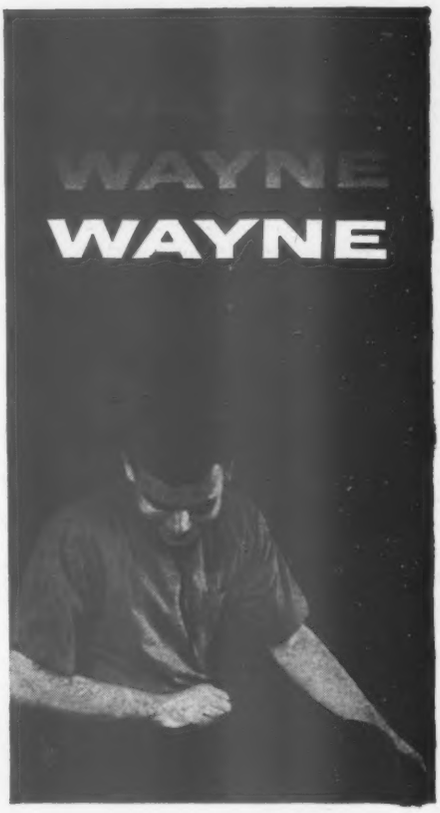
Electrically controlled, the timer is driven by a single synchronous motor. To indicate operation, a neon pilot lamp glows; when resetting, an additional lamp is lit.

*For more information, circle number 854 on the Reader Service Card.*

■ ■ ■

### Mobile maintenance service

A mobile maintenance service station, manufactured by the M. D. Stetson Co., has been designed as a time and step-saver for custodians. The unit features bins for storage of cleansers and detergents, racks for mops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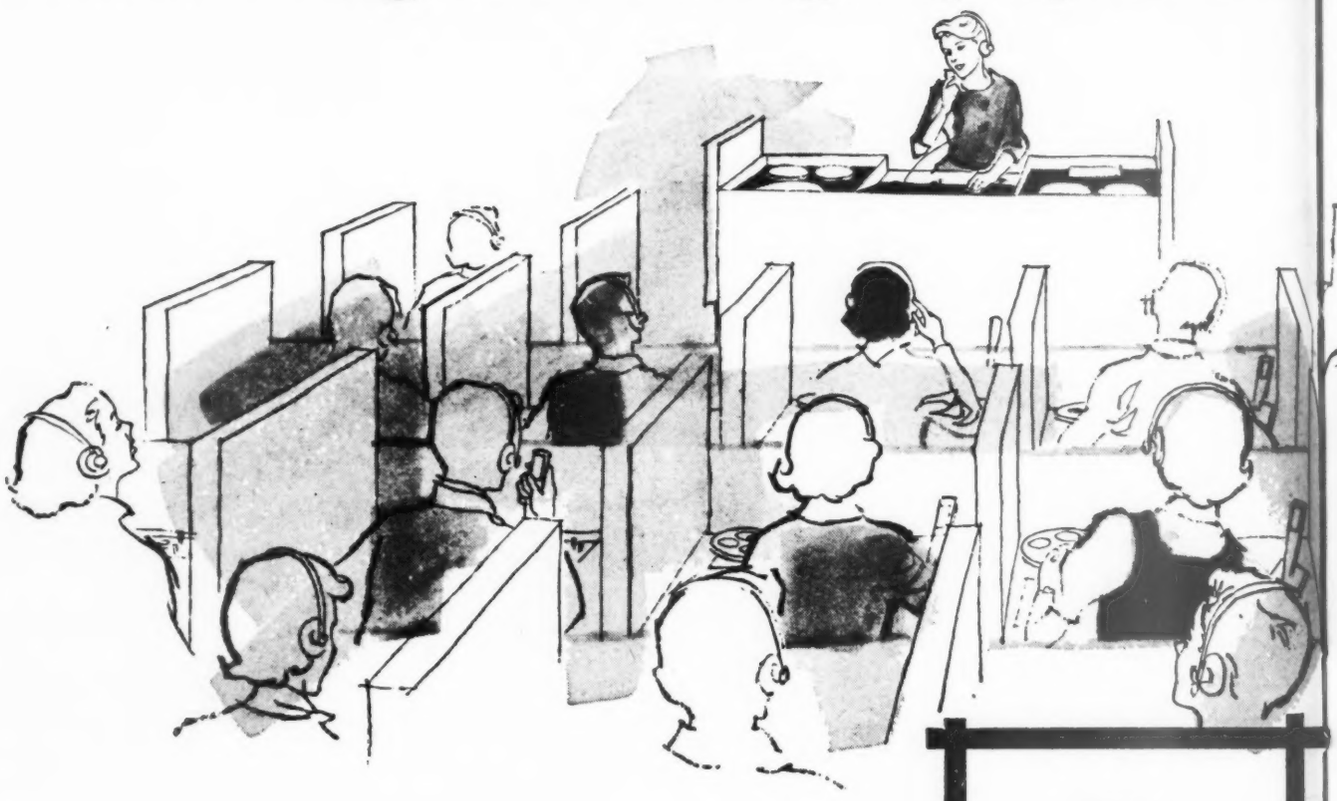

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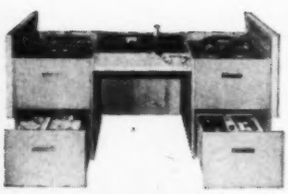

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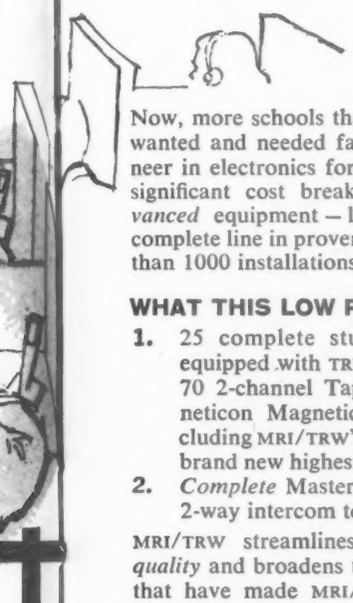

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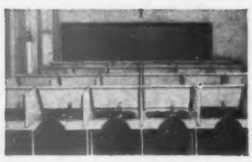

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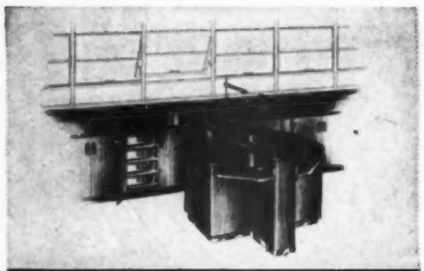
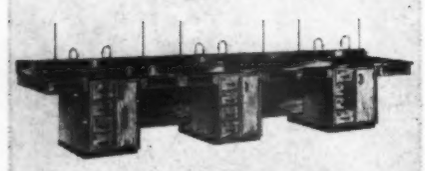


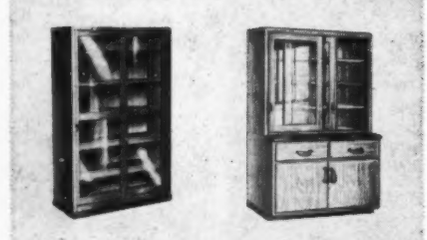
CENTERSCOPE TABLE

INSTRUCTOR'S DESK — W5750



COMBINATION SCIENCE TABLE — W5210

MODULAR CENTER TABLE — MOD100



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*For more information, circle number 816 on the Reader Service Card.*

■ ■ ■

### Bind your reports

A combination hole punch and bookbinder, lightweight and portable, is being marketed by the General Binding Corp. The desk-size unit is said to bind all reports, catalogs and presentations with spiral plastic material.

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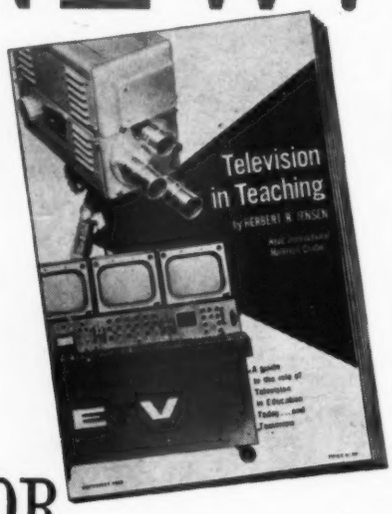


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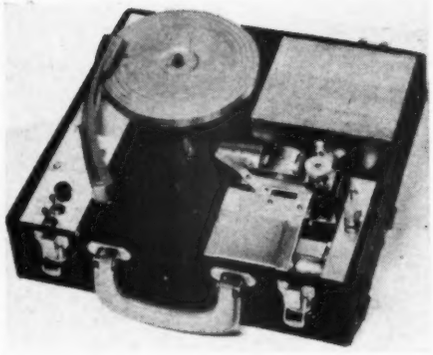

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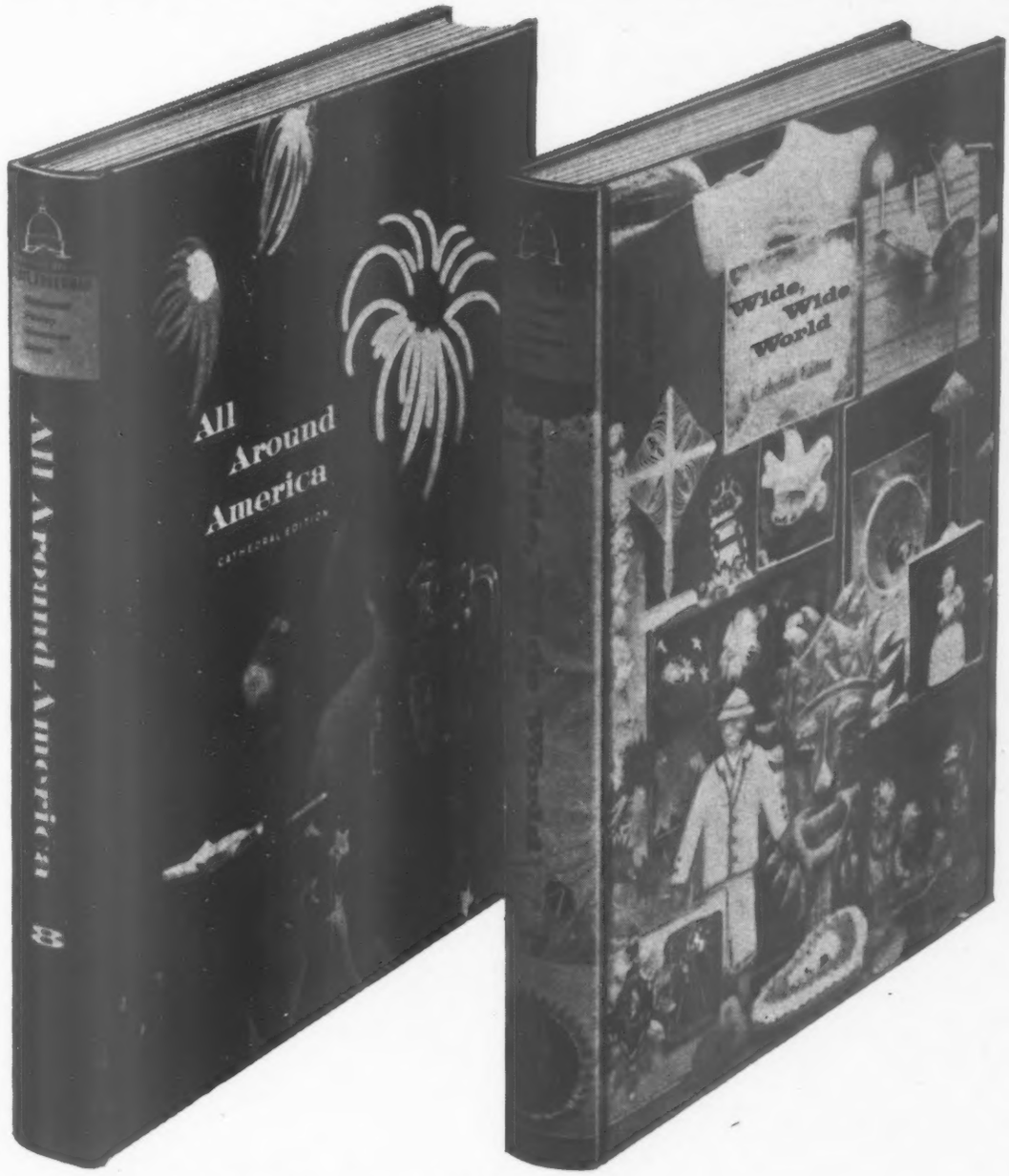


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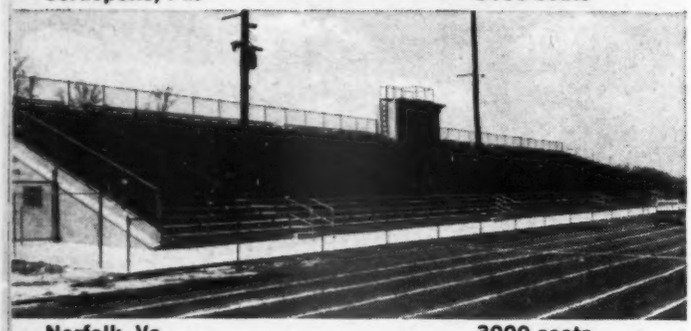

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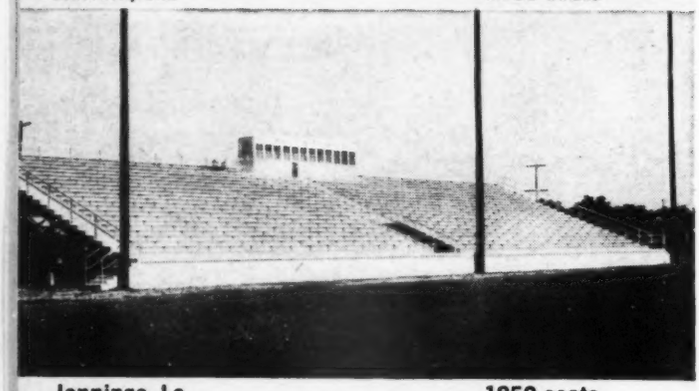

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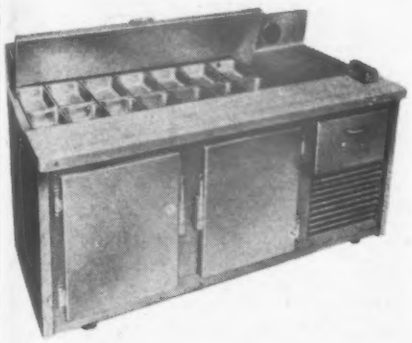

and up to 14 containers for sandwich fillings.

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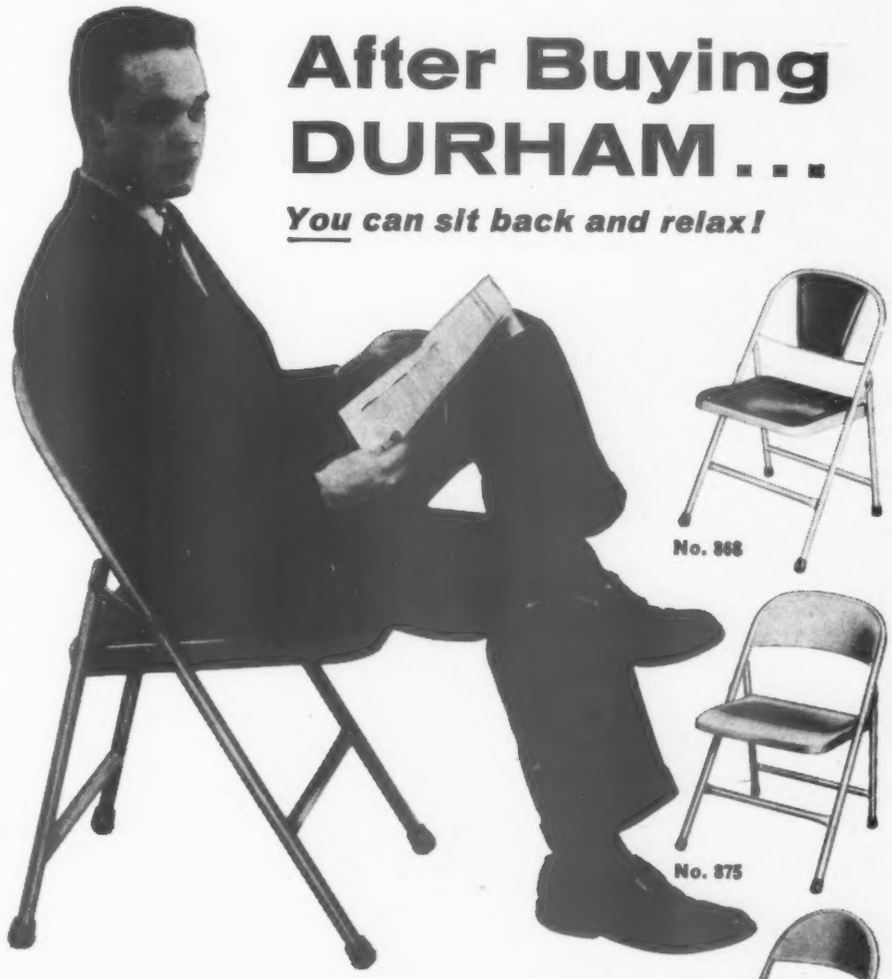

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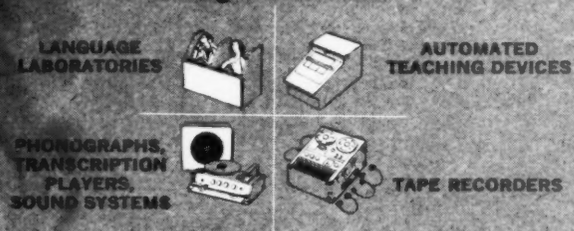


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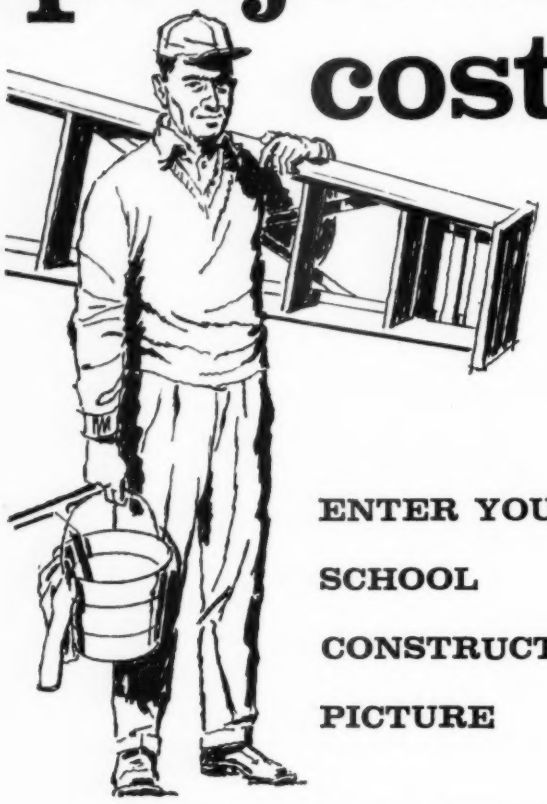

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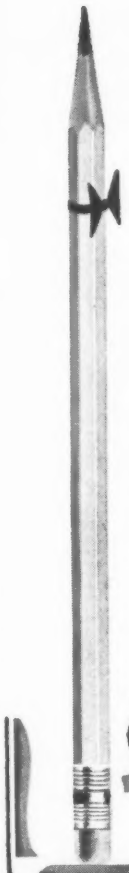

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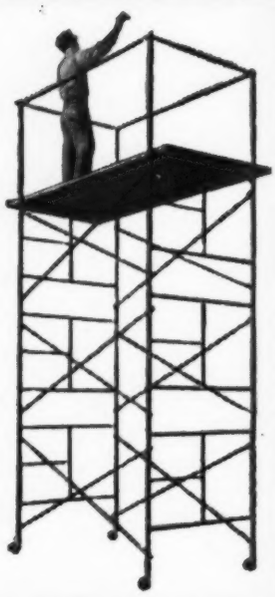

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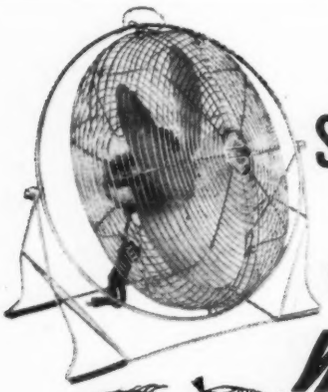

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